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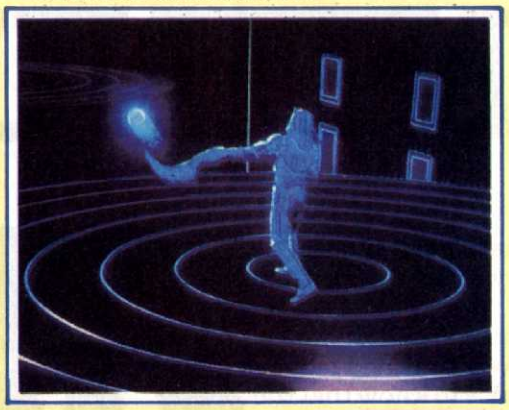

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ELECTRONIC GAMES (ISSN 0730-6687) is published monthly by Reese Publishing Company, Inc., 235 Park Avenue South, New York, NY 10003. Application to mail at second-class postage rates pending at NY, NY and additional mailing office © 1982 by Reese Publishing Company, Inc. All rights reserved. © under Universal, International and Pan American Copyright conventions. Reproduction of the editorial or pictorial content in any manner is prohibited. Single copy price, $2.95. Subscription rates: one year (12 issues) $28; two years (24 issues) $48; Canada, one year $32; foreign, Air Mail only, one year $64. Address subscription orders and correspondence to ELECTRONIC GAMES, P.O. Box 1128, Dover, NJ 07801. Change of address takes 60 days to process; send old address label, new address and zip code. All material listed in this magazine is subject to manufacturer's change without notice, and publisher assumes no responsibility for such changes. Printed in the U.S.A.

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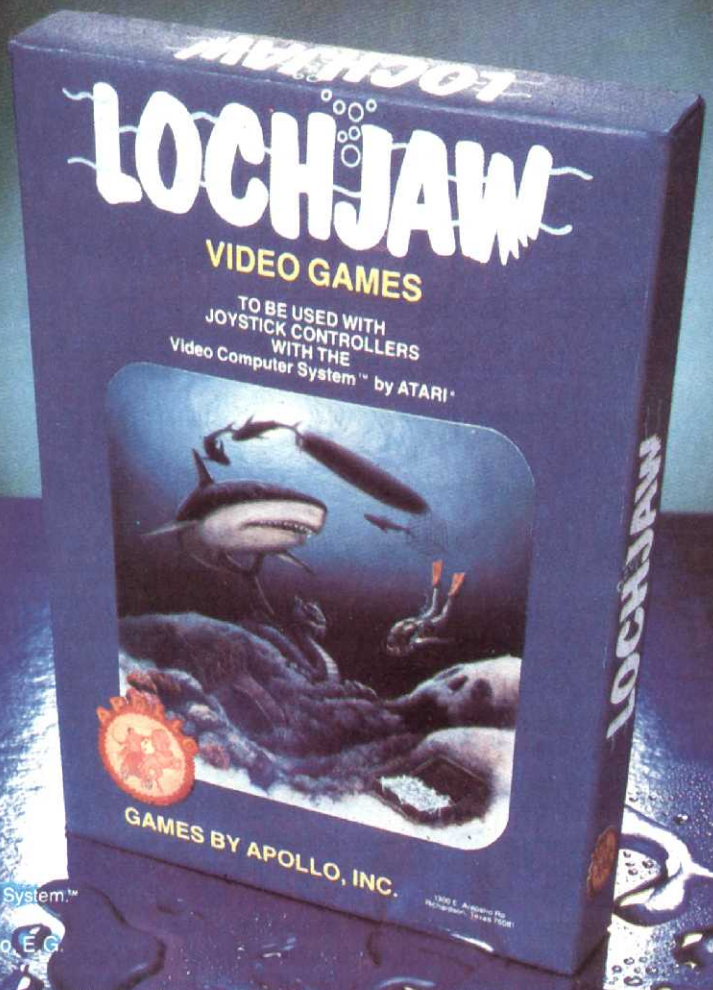
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Arcading— Fad or Hobby?

By Arnie Katz

I was sitting in my office at Reese Publishing, trying to relax a little after finishing my fortieth press interview of the week. The tremendous public interest in every facet of arcading has kept the telephones ringing almost constantly since the first issue of **Electronic Games** hit the nation's newsstands last October. Newspapers, magazines, television and radio are pumping out at least one major feature a day about electronic gaming, and most of them look to this magazine for quotes, statistics and predictions.

As I thumbed through the towering piles of press clippings and even larger stacks of mail from you loyal **EG** readers that cover my desk, I found myself wondering just how long electronic gaming will stay in the intense glare of the media spotlight. In other words: Is this a real hobby or just a passing craze that will be dead and buried in six months?

I've been pondering this question a lot since then. Although there's no sure way to forecast the future, my analysis of the situation leads me to believe that arcading is very much here to stay.

Of course, things will change as arcading becomes more fully integrated into the American lifestyle. There's no question that electronic gaming will not grab quite as many headlines in the future as it is at the present time.

It is equally obvious that the electronic gaming phenomenon has sparked some faddish happenings. There's very little difference between playing a coin-op machine for two or three straight days and sitting on top of a flagpole in the town square.

Another sign that there's at least a minor outbreak of faddishness is the flood of quickie-ripoff strategy books. There's absolutely nothing wrong with writing a guide to help players raise their scores, but some of these paperbacks are dashed off in an afternoon and rushed to the stores almost overnight to cash in on coin-op arcading while it's still a hot topic. (Fortunately, we're also getting a few more thoughtful and well-researched books on electronic gaming.)

But take away these faddish elements and what remains is the nucleus of an enduring pastime that is destined to rival all existing hobbies in popularity. Unlike recent crazes such as Rubik's Cube, these games don't have pat solutions. Even when you know the best strategies for **Tempest** or **Centipede,** playing is no less challenging and enjoyable.

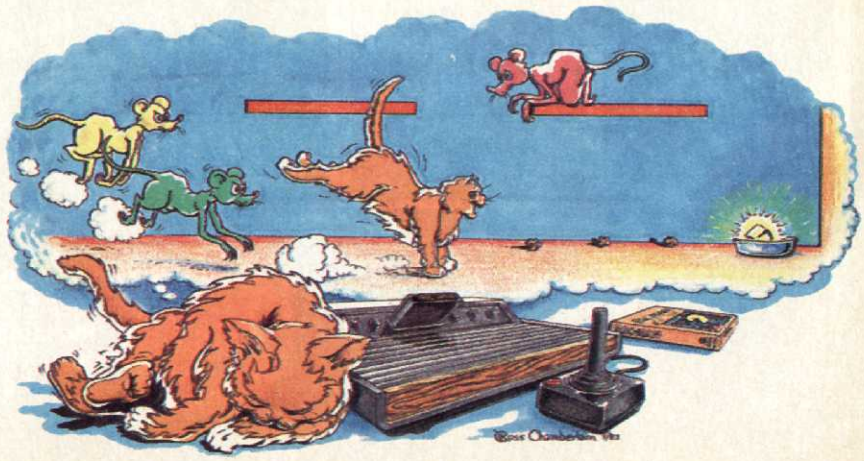
Past crazes like the hoola hoop were essentially static. You either learned to keep the hoop spinning, or you didn't. Period. Like all true hobbies, however, electronic gaming is dynamic. There are always new games offering novel situations and styles of play.

The important thing for arcaders to understand is that rapid growth will continue even after the craze dies down, as it probably will within the next year. The best comparison may be with the introduction of television on a mass scale in the early 1950's.

TV became a fad. Every Tuesday night, everything screeched to a halt so people could huddle around sets to watch Milton Berle.

Television is no longer a craze, and few of us would go to such lengths to catch an episode of any regular series. Yet the medium itself is probably 10 or 20 times as popular today as it was three decades ago. TV has simply become part of the fabric of life in this country.

Electronic gaming is heading in the same direction. The publicity may ease off, but the ranks of arcaders will continue to increase as more and more people plug into the fascinating world of electronic gaming.



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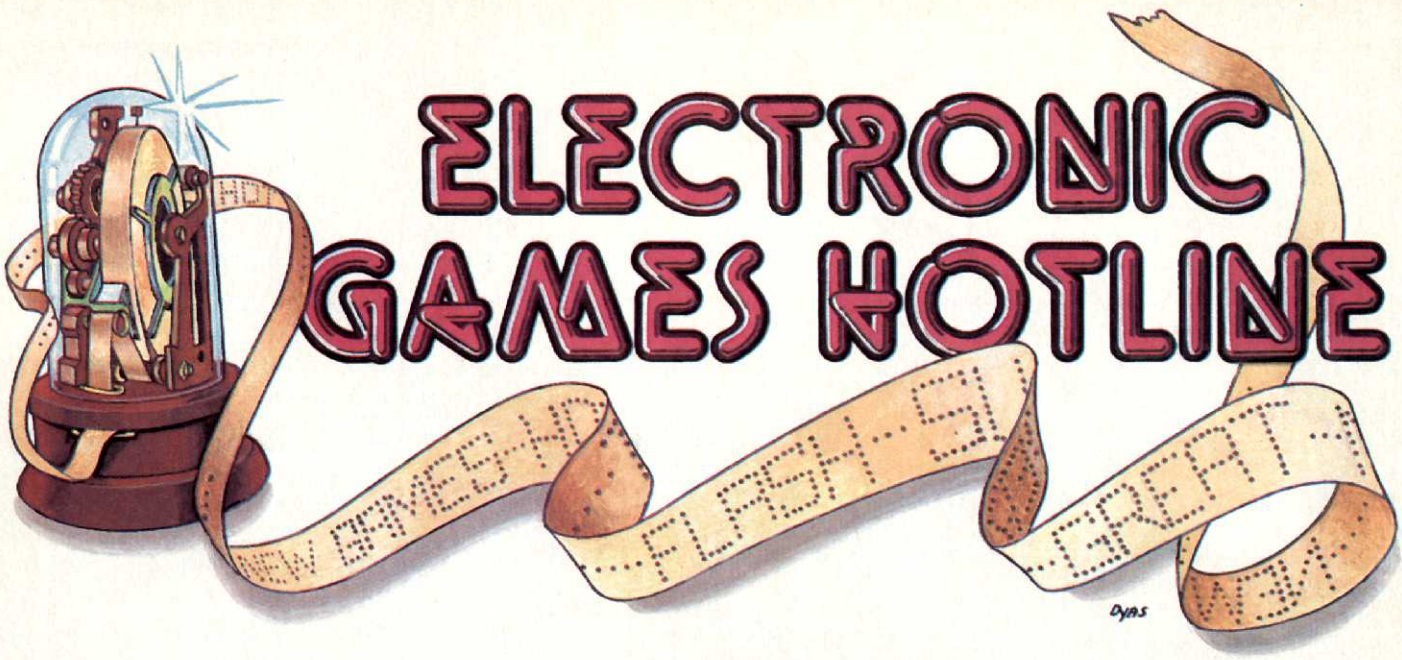


Atari Stages Pac-Nic

Atari is pulling out all the stops in promoting its VCS **Pac-Man** cartridge, already well on its way to becoming the best selling videogame cartridge of all time on the basis of its one million advance orders. To pave the way for the title's release in late March, Atari held a series of events from coast to coast which culminated in Pac-Man Day on April 3.

The kick-off for the campaign was the Pac-Nic—which is, of course, a picnic with the celebrated gobbler and his quartet of pursuers as the guests of honor. More than 3,000 media representatives jammed New York City's swank Tavern on the Green. The hosts delighted press attendees with gifts of *Pac-Man* paperweights and buttons, decorated the dining room with special *Pac-Man* tablecloths and napkins and even presented a well choreographed floor show in which the gobbler and goblins cavorted to special versions of such songs as "Leader of the Pac (k)".

Atari Report

* The Sunnyvale company has announced a very intriguing change in its previously announced schedule of VCS-compatible cartridges slated for publication during 1982. Gone from the list is **Foxbat**, believed to have been an air combat game featuring jet planes, replaced by—**Raiders of the Lost Ark**!

* Other big-name games to be issued this year include **Defender**, **Star Raiders** and **Berzerk**. Company insiders, meanwhile, are very keen on **Yars Revenge**, a science fiction game that has done exceptionally well in pre-publication testing.

* The Super-Game is nearing readiness and could well be in the stores this month. The designers are going all out, too. Word has it that, in Atari's baseball cart for the Super-Game, a sliding runner will actually kick up puffs of dust and, even more incredible, the manager will be able to leave the dugout to argue a close one with the computer umpire.

* Atari's Home Computer Division has tightened the competitive screws another turn. Following up on last year's price-reduction for the hot-selling 400 computer, the company has slashed the list price on the 800 by nearly $200. It will now carry a tag of slightly less than $900.

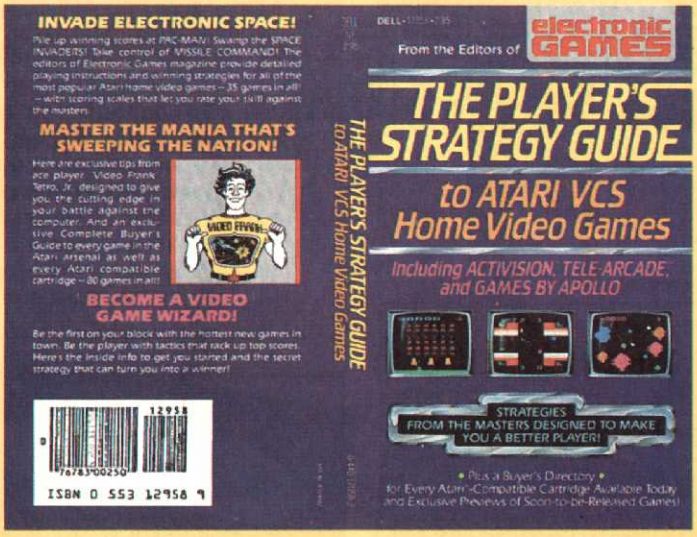
Coin-oppers Go for the Gold

Arcade aces will divide $100,000 in prizes in a nationwide tournament sponored by The Gold Arcade Club, a network of commerical amusement center operators from coast to coast.

The competition, set to begin this summer, will be divided among seven age categories. Gaming aces will begin competition at the local level, with the high scorers advancing to play in city, region, state and, ultimately, international events. The finals are planned for Colorado Springs, Colo., December 28-30. The grand champion will receive a 1923 Ford Total "T" street rod replica valued at $18,000. The next 36 finishers will win 20-acre gold or silver mining claims.

Dell to Publish EG Strategy Guide

"The Player's Strategy Guide (to Atari VCS Home Video Games)", written by **Electronic Games'** Editor Arnie Katz, Executive Editor Bill Kunkel and Strategy Editor Frank Tetro Jr., will be arriving in bookstores across the country this month. The 224-page paperback, projected as the first of an on-going series from EG and Dell, deals with all games playable on the Atari Video Computer System.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THE PLAYER'S STRATEGY GUIDE to ATARI VCS Home Video Games

Prepared after several months of exhaustive research, the paperpack focuses on 25 of the most popular VCS—compatible cartridges, including games produced by Activision and Games by Apollo. Each of the 25 games is fully described, and there are strategy hints, complete with appropriate diagrams, for each title. In addition, there is a catalog that provides basic information about every VCS-compatible cartridge available to the public at the time of publication.

Pac-Man Bites K.C. Munchkin!

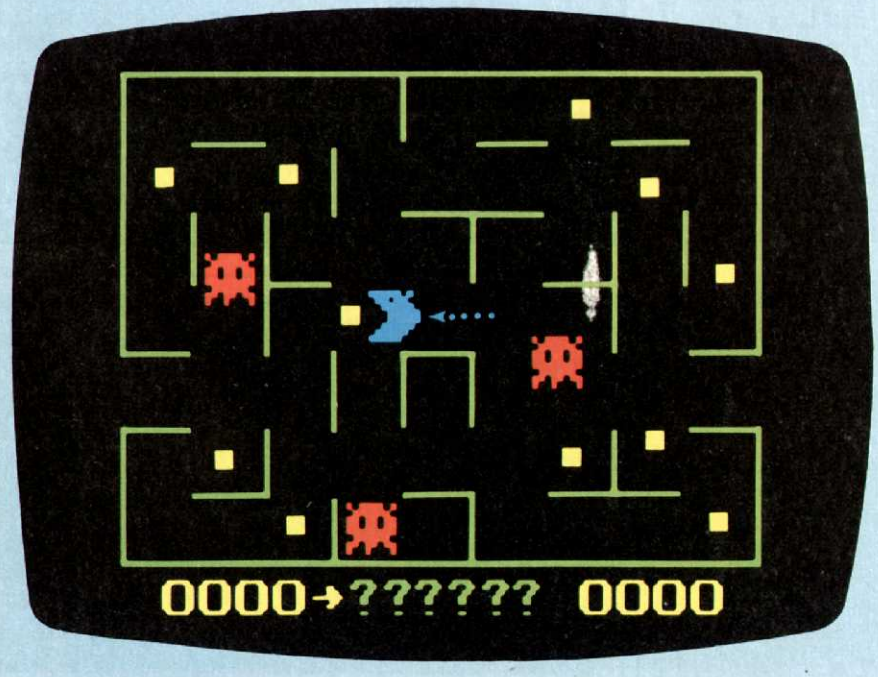
Atari's attempts to protect its license for the home version of the top-rated coin-op, **Pac-Man**, have brought the company into a protracted legal struggle with ace rival North American Phillips. The Sunnyvale, Ca., manufacturer claim that N.A.P.'s Odyssey division has produced a cartridge, **K. C. Munchkin**, which infringes on its own VCS **Pac-Man.**

The fireworks began last November. At that time, Atari sought to have *Munchkin* yanked from the stores in time for Christmas. Although the injunction wasn't granted at that time, the judge ultimately ruled that the graphic elements used in **Munchkin** did, indeed, infringe on the *Pac-Man* visuals.

Odyssey appealed this decision and won a temporary stay which allowed it to keep shipping its own popular gobble game.

As **Electronic Games** goes to press, there has been yet another important development. Atari has succeeded in getting a judge to vacate the stay, with the result that *Munchkin* is not being shipped to stores at the present time.

In a related case, On-Line Systems, maker of **Jawbreaker** for the Atari 400/800, has settled its litigation with Atari. The software publisher is believed to have negotiated a licensing agreement that will allow it to continue to market its much-praised maze chase.

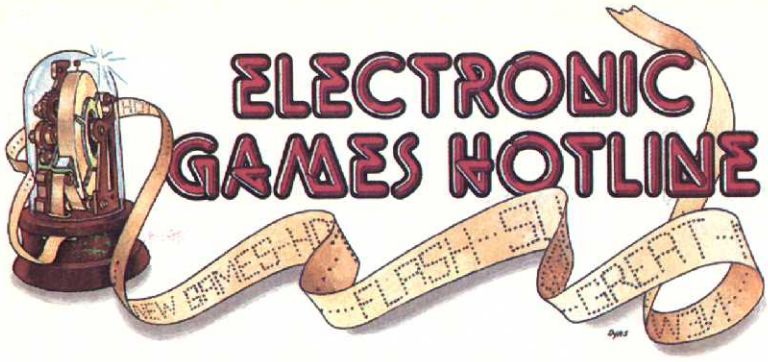


Insert Tips Here

Arcaders who have been frustrated for years by the scanty instructions provided on most coin-op games have cause to fling their hats in the air and let loose with a whoop to triumph. The traditional joke among coin-op players has always been that game instructions generally consist of three words: Insert coin here.

Well, friends, those days are gone. Today's coin-ops almost invariably include some form of game instruction, either printed on the cabinet or as an optional service at the beginning of a play. Midway is now trying a most interesting and experimental technique to support its new science fiction extravaganza, **Bosconian.**

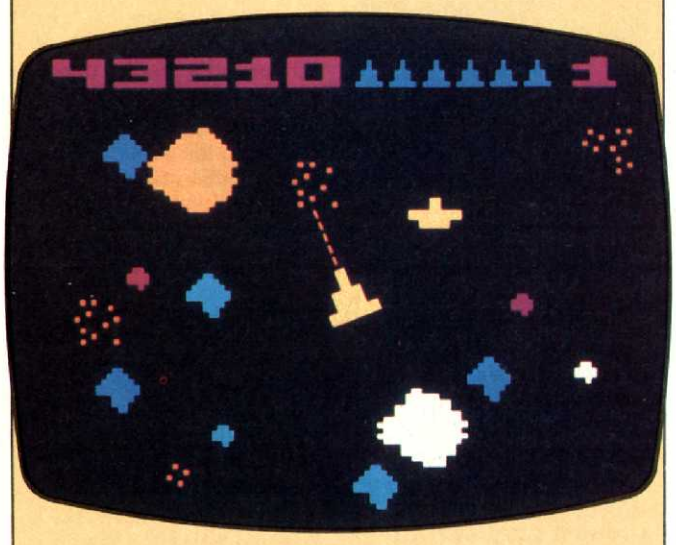
The game magicians at Midway, which holds the U.S. arcade rights to this Namco creation, have decided to actually provide players with hints on how to score higher and play longer. This booklet of scoring advice is being distributed from slots attached to some of the machines, but those arcaders who want to be sure they get a copy should write to Midway (re: *Bosconian* scoring Tips) at 10750 West Grand Ave., Franklin Park, Illinois 60131.



EG Launches Bi-weekly Newsletter

Do you want more news reviews than you can find even in a whole issue of **Electronic Games?** So do many of the gamers who've written to this magazine. In answer to the pleas of thousands of **EG** readers, the folks who publish the only consumer magazine devoted to electronic games are starting a bi-weekly newsletter about the same exciting topic.

Arcade Express, which will make its debut August 1, will contain eight packed pages of the latest information. "There'll be



Asteroids Keeps Top Spot

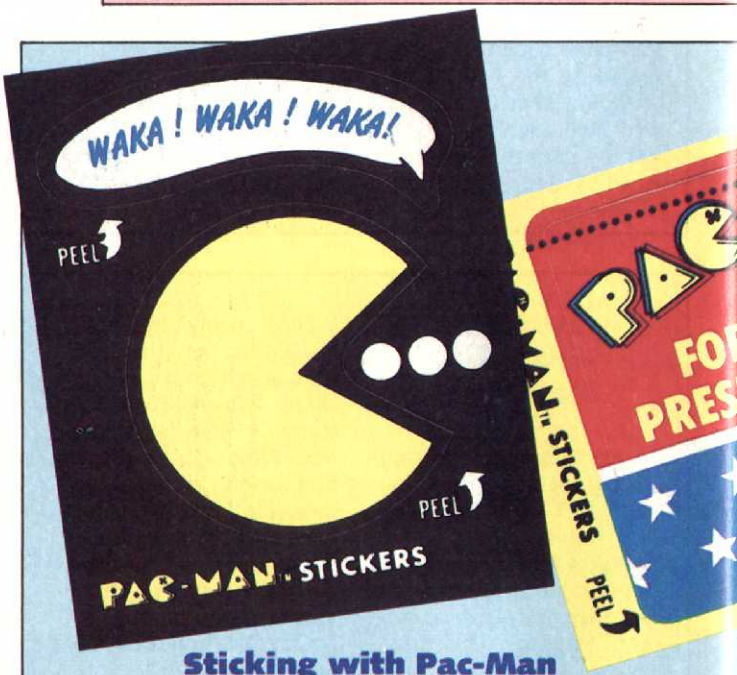
Readers of **Electronic Games** may have moved on to other coin-op games in the coin-op arcades, but **Asteroids** is still the overwhelming favorite among the home videogame cartridges. Atari's space battle for the VCS continued to hold down the top position in the popularity ratings for the third consecutive month.

While **Missile Command** and **Adventure**, both produced by Atari for the VCS, also hung onto the spots they've maintained since the inception of the popularity poll, **Space Invaders** fell from its fourth ranking completely out of the "top 10" this month. Activision's **Kaboom!** moved up in the ranking for the second straight month to cop the fourth spot.

Another Activision title, **Stampede,** holds the honor of making the biggest gain of any game already in the "top 10". Moving up nearly as much was Intellivision's hot arcade-style entry **Astrosmash**, and the same company's **Major League Baseball**, which returned to the list after disappearing for a month.

Star Raiders, the flagship cartridge in Atari's offerings for its own 400/800 computer systems, is far and away the most popular computer game program among **EG** readers. In the three months it has spent at the top of the list, the space pilot contest has never defeated the runner-up by less than a two-to-one margin in the voting.

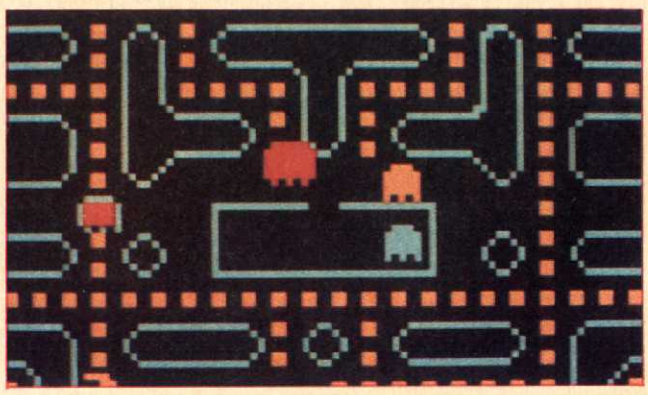
Pac-Man still reigns as king of the coin-ops, with **Tempest** and **Defender** maintaining the positions they held last month. Compensating for the abrupt decline for coin-op *Asteroids*, two other Atari games, **Centipede** and **Battlezone,** showed increased strength this time out.



Sticking with Pac-Man

Fleer, a major manufacturer of novelty bubble gum cards, has begun production on a line of **Pac-Man** stickers and a "rub-off" version of the game itself. The stickers, emblazoned with such illustrated messages as "Pac-Man for President" and "Wacka-wacka-wacka", are cute and colorful with the gobbler and the infamous "gang of four"—Speedy, Bashful, Pokey, and Shadow (aka "Blinky", "Pinky", "Inky" and "Clyde") rendered in all their familiar glory.

Also available are cards featuring a *Pac-Man* rub-off game which features a maze-like playfield filled with gold dots. Starting at the traditional jumping off point (underneath the goblins' corral), players travel in any direction, rub-



no annoying 'lead time' to keep us from getting all the hottest news of the home and coin-op fields to readers as fast as it happens," says editor Joyce Worley. "We're going to print no-nonsense evaluations of dozens of new products in every issue, and the newsletter format will get the word into our readers' hands before the games reach the retail stores or amusement centers in many cases!"

A subscription to **Arcade Express** will be $25 per year (26 bi-weekly issues), with a half-year available for $15. Order from: Arcade Express, 235 Park Avenue South, Sixth Floor, New York, N.Y.

bing off the gold dots and uncovering what lies beneath it—dot or ghostie. Get three goblins—not counting blue ones—and you're out. White dots are good for a point, blue monsters get ten points for the player and, should a cherry be uncovered in the race through the maze, 50 points are collected. The game can be played using one card—alternating turns—or two, with simultaneous action.

Inside Mattel

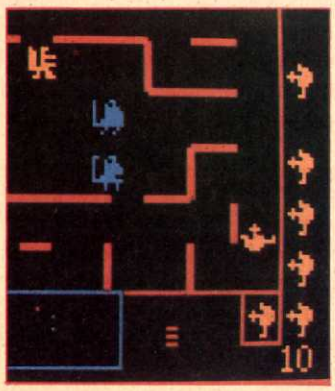
* Mattel has evidently conquered its product problems at last. The log-jam that caused a scarcity of new Intellivision games during most of the last year has been broken. And judging by the high quality of Mattel's newest titles, Intellivisionaries will have plenty of reasons for dancing in the streets.

* The biggest news at Mattel is the pair of Tron cartridges which the company will publish shortly. Based on the upcoming Walt Disney animated film, **Tron I** pits an electronic warrior against a bunch of nasties that fling deadly, frisbee-like disks. **Tron II**, also drawn from the movie, mirrors the film's main theme, an odyssey through the innards of a computer. The closer the gamer gets to the CPU, the more resistance the computer generates to stop your progress.

* There's more than the *Tron* series, too. **Night Stalker** is a fascinating dungeon/maze contest with excellent graphics and movement. **Star Strike** will further enlarge the science fiction section of the Intellivision game library, while **Frog Bog** is a strong candidate for the novelty hit of the year. Arcaders control a pair of frogs lolling on lilypads, which must leap into the air to snare flies with their long, snapping tongues. When a frog overshoots the target, he ends up in the drink and has to swim back to his floating perch. The game can be played with a variety of background settings corresponding to times of the day ranging from sunrise to midnight.

Astro Update

Here are the new titles scheduled for release in '82 from Astrovision for the former Bally Professional Arcade: **Munchie**, a gobbler game that may or may not be released, pending talks with Atari (see Atari story elsewhere in Hotline); **The Wizard**, a home version of **Wizard of War** from the coin-op version's creator, Bob Ogdon; **Solar Conqueror**, an exciting **Asteroids**-inspired contest with a number of its own unique features; **Cosmic Raiders**, a sideways-scrolling shootout; **Quest for the Orb**, a high adventure program; **Pirate's Chase**; **Coloring Book** with Light Pen; and **Music Maker.**



Electronic Games' Picked Hits

Most Popular Videogame Cartridges

Position This Month	Position Last Month	Game	System	Manufacturer
1	1	Asteroids	Atari VCS	Atari
2	2	Missile Command	Atari VCS	Atari
3	3	Adventure	Atari VCS	Atari
4	5	Kaboom!	Atari VCS	Activision
5	7	Astrosmash	Intellivision	Mattel
6	9	Stampede	Atari VCS	Activision
7	—	Video Pinball	Atari VCS	Atari
8	—	K.C. Munchkin	Odyssey²	Odyssey
9	—	Major League Baseball	Intellivision	Mattel
10	—	Galactic Invasion	Astro Pro Arcade	Astrovision

Most Popular Computer Software Programs

Position This Month	Position Last Month	Game	System(s)	Manufacturer
1	1	Star Raiders	Atari 400/800	Atari
2	3	Jawbreaker	Atari 400/800	On-Line Systems
3	5	Empire of the Over-mind	Atari, TRS-80, Apple II	Avalon Hill Co.
4	2	Missile Command	Atari 400/800	Atari
5	—	Castle Wolfenstein	Apple II	Muse Software

Most Popular Coin-Op Videogames

Position This Month	Position Last Month	Game	Manufacturer
1	1	Pac-Man	Namco/Midway
2	2	Tempest	Atari
3	3	Defender	Williams
4	5	Centipede	Atari
5	6	Battlezone	Atari
6	—	Galaxian	Namco/Midway
7	7	Berzerk	Stern
8	10	Donkey Kong	Nintendo
9	—	Gorf	Midway
10	—	Scramble	Stern

Readers Choose Top Games

Since mere *quantity* of play doesn't necessarily equal actual popularity, **Electronic Games** bases its standings on the votes of its readers. These lists of most popular games are based on the more than 600 Reader Polls. We update the "picked hits" lists in every issue of **Electronic Games.**

So send in your votes!

Introducing . . . The National Arcade Scoreboard

* "How do I stack up against other players?" is the question more and more readers are asking these days. To help find out, **Electronic Games** is establishing the National Arcade Scoreboard.

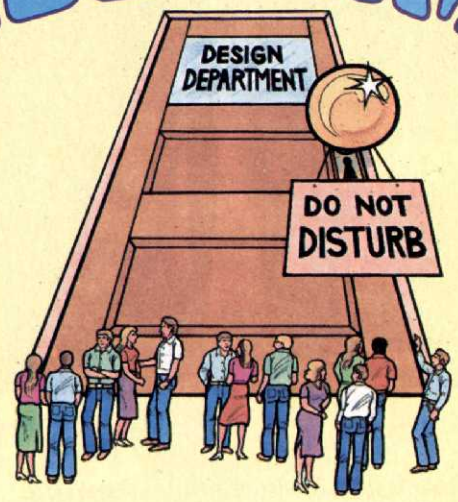
Beginning with the July issue, we will publish a list of high scorers for some of the most popular home arcade games. Don't worry if your particular favorite isn't among the first group of games we're announcing this issue; we'll be adding more as soon as we get the basic mechanics of administrating the scoreboard down pat.

To enter this competition, just follow these simple rules:

1. Every score must be accompanied by a photograph of the TV screen showing the score. These photos do not have to be of publishable quality, just readable by our judges.
2. All photographs received become the property of **Electronic Games** and none can be returned.
3. Be sure to include your complete name and address. (We will print only the name and city in the magazine, but we may want to contact high scorers for helpful gaming hints.)The games which will be listed in the National Arcade Scoreboard are:

1. **UFO** (Odyssey)
2. **Asteroids** (Atari VCS)—Game #6
3. **Grand Prix** (Activision)—course #4
4. **Galactic Invasion** (Astrovision)—difficulty #9
5. **USAC Auto Racing** (Mattel)—course #1
6. **Spacechase** (Apollo)—game #1

INSIDE GAMING



Activision's Alan Miller: Games in Perspective

By Bill Kunkel

When talking with Activision's ace game-designer Alan Miller, it's amazing to realize you're speaking with a true pioneer in the videogame field. Alan is, after all, an extremely youthful man in his early thirties with the enthusiasm and twinkling eyes of a teenager. But then, the videogame industry itself is something of a youngster, having only become a vital part of the American lifestyle within the past five years. Al Miller has not only watched it grow, he has personally helped to nurture the videogaming by providing the much-needed element of depth in screen graphics. In terms of creating a three-dimensional playfield, no designer has been more important to the home videogame scene.

Alan's computer training began at Berkeley where he studied computer simulations and graduated in 1972 with a Bachelor of Science degree. His first job upon leaving the University took him to the greath white north, specifically to the Canadian lumber forests to computerize the industry.

"The last major technological breakthrough to have touched them up there," he chuckled, "was electricity." After completing the task of modernizing woodcutting in Canada, Al worked at a series of jobs in the computer industry including a stint at testing control systems for NASA. His work there on the orbital payload control led him into working with microprocessors and proved invaluable experience for his next job at a then-unknown company called Atari.

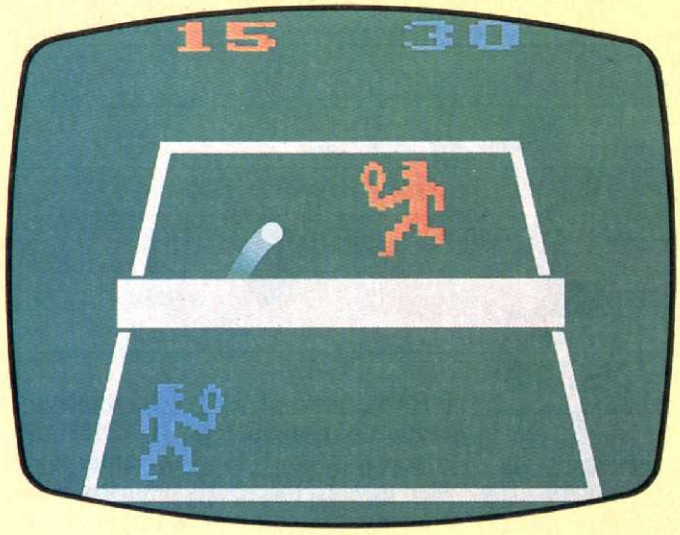
"I saw a want ad in a local newspaper in Silicon Valley (the name given to the San Jose-Sunnyvale-Santa Clara area where much of today's microchip industry is centered) for someone with microprocessor experience and I applied." This was in 1977, one year after the company had been purchased by Warner Communications. Then known mostly in the coin-op field, Atari was on the verge of smashing open the home videogame market with a little item they called the VCS. "I started at Atari about six months before the completion of the VCS," recalled Alan, "and the first game I worked on was **Surround.** Now, graphically, this program was extremely crude. The entire playfield consisted of only 40 pixels [the box-like spaces that comprise videogame graphics]." It was also flat, decidedly two-dimensional and definitely misnamed. "That's true," admits Alan. "Surrounding your opponent isn't the only, or even the best, way to win. The title, the conception, was weak."

Several similarly-bland titles followed, including **Hangman** ("which used similar graphics") and **Concentration.** "They originally called that game **Hunt and Score** for some reason. Larry Kaplan suggested the idea, actually. At the time, Atari wanted games that would use their keypad controllers, and this became one of them."

With his next creation, Alan finally hit paydirt. "I wanted to do a game that used moving player objects," he explained. The game became **Basketball,** a ground-breaking concept not only for its player movement—which was certainly impressive—but for the dimension Alan gave to this sports simulation. By drawing the court as a trapezoid, it created, the illusion of depth in a programmable home videogame for the first time. Previous versions of video roundball had only horizontal player-movement, but Alan's "full court" allowed movement in any direction.

Alan's last project at Atari involved its 400/800 computers. Called in ten days before the systems were to be unveiled at a trade fair, a team consisting of Miller, Bob Whitehead, Larry Kaplan, Dave Crane and several other computer specialists devised an operating system

Alan Miller, one of the driving forces behind the creation of Activision continues to break new ground in his videogame software



TENNIS

ATARI BASKETBALL

for the new computer line. As a result of this successful work, Alan is naturally anxious to see the 400 attain sufficient circulation to merit Activision's involvement in creating game software for it. "I'd love to design games for it," he admitted cheerfully.

Actually, he already has. A game-playing computer, after all, isn't much good without games, so Alan set about creating a new 4-player version on **Basketball** for the 400/800. The game features realistically-drawn players and even more full-bodied realism in terms of court perspective.

This brings our story to the fateful date of October 1, 1979 when the quartet of designers mentioned previously (known among their peers as the Gang of Four) and a savvy visionary named Jim Levy began Activision, Inc., the first videogame software company. Starting out, Alan created a videogame version of **Checkers** before taking the next step in his journey into the third dimension, **Tennis.**

Tennis was one of the most marvelous surprises in videogame history. Weaned on the **Pong**-style version of the game, players were delightfully astonished to discover a form of video tennis that provided actual, full-court movement. Using two, stacked trapezoids divided by an all-white net, Alan forged ahead of even his own past work by providing the final visual cue.

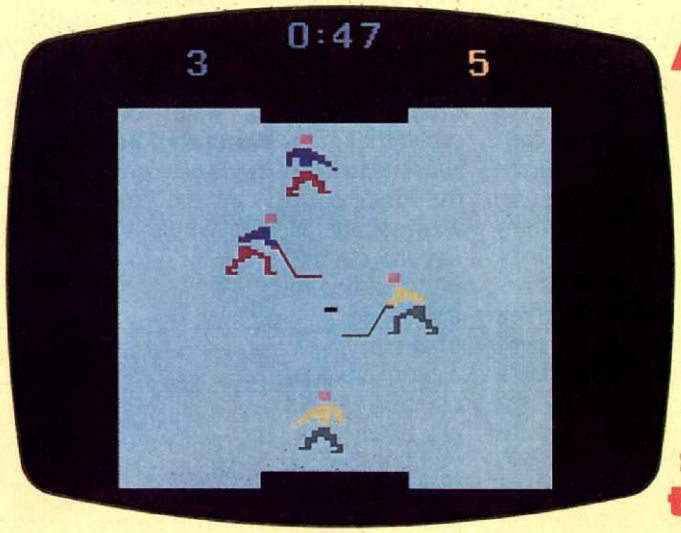
"Several people had complained to me that they had difficulty in determining their exact position in *Basketball*. They could seem to be under the net when in fact they were closer to the sidelines. So, in *Tennis* I decided to give the ball a shadow. Its position on the court would provide the player with that last bit of visual information." The ball's shadow is a small thing, but its effect is great. The illusion of depth on a flat surface becomes totally convincing.

Alan Miller has single-handedly disproved the contention that good sports simulations can't be done on the VCS. Along with Bob Whitehead's **Skiing** and Atari's **Pele' Soccer,** Alan's *Basketball, Tennis* and **Ice Hockey** are among the best sports videogames available. *Ice Hockey* brought two-player teams with independent movement to the VCS for the first time as well as pinpoint passing and realistic graphics.

For his next inspiration, however, Alan turned to the stars. "I'd been playing a lot of Odyssey's **Cosmic Conflict,**" he remembers, "and I got to thinking that by moving the stars toward the player, you could more realistically simulate outer space flight." The result of this idea is **Starmaster,** Activision's newest space game. *Starmaster* features warping through hyperspace, cosmic grid movement, and combines strategic and tactical dogfight elements in the most realistic space videogame ever to grace the home screen.

As a game designer, Alan is a believer in the power of positive thinking. "Your biggest problem in designing games for the VCS," he explained, "is the pre-conceived ideas of what the system can and cannot do. This is self-limiting. If you think you can't do it, you won't. It was always believed that you couldn't scroll on the VCS, then Bob did *Skiing,* and that was cast aside. Programming for the VCS requires detailed experience but after you're done it's always the same: the programmer does what he believes he can do."

Alan Miller smiles. "The more I work on the VCS, the more my horizons open up." And the players feel exactly the same way.



ICE HOCKEY

Alan Miller has proved that the VCS can play quality sports simulations.

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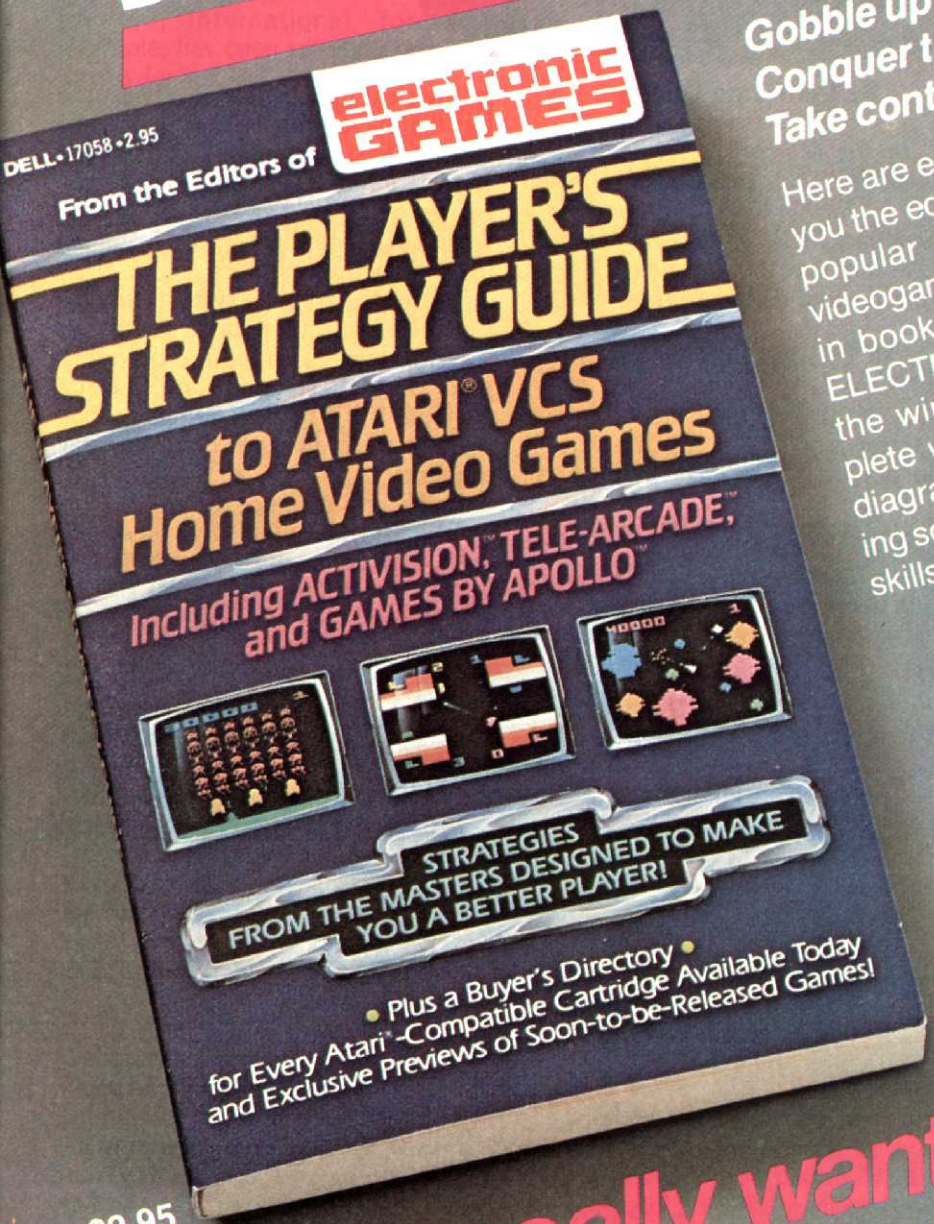
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Once again, our waiting room is packed tight with inquiring arcaders, so let's jump right into the questions. This issue's best query comes from Steven Justman of Forest Hills, New York, so take it away, Steven!

Q: *How are music and voices put into videogames like* **Pac-Man** *and* **Vanguard?** *(from Steven Justman, Forest Hills, N.Y.)*

A: There are essentially two methods for adding sound capabilities to arcade coin-op games. The first is simple audio tape, usually "looped" to run, on cue, again and again. More recent games, however, such as Centuri's **Vanguard** actually use computer "voice chips". These chips allow the computer to articulate warnings, taunts and general kibitzing.

But "talking" videogames are no longer limited to the coin-ops, as we shall see from our next question.

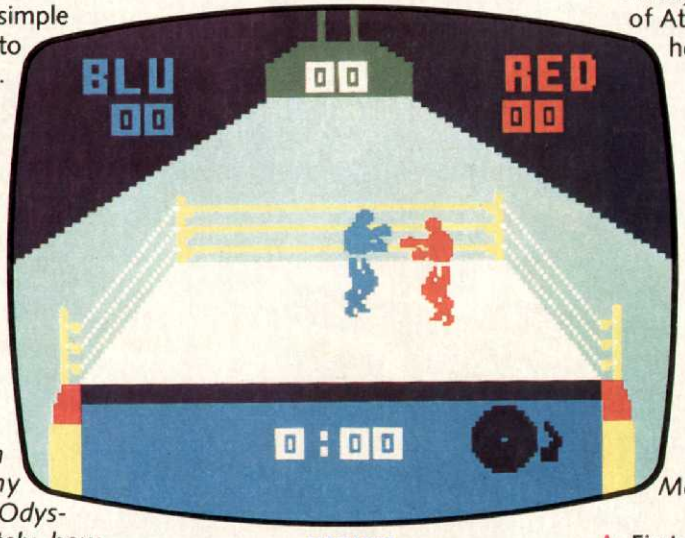
Q: *Will the NAP (North American Philips) Company ever offer a voice box for the Odyssey², and if so, approximately how much will it cost? (from Garfield Francis, Rego Park, N.Y.)*

A: As a matter of fact, Garfield, the 0² folks demonstrated just such a "speech synthesis unit" at a recent trade fair, and it sounded just great. The unit is plugged directly into the Odyssey's cartridge slot and specially produced "talking" videogames are then inserted into the speech system. As of this writing, the actual retail price is still up in the air.

By the Game Doctor

Q: *In the March "EG Hotline" you mentioned that* **Boxing** *was pulled back for further work. I purchased this game back in December and I want to make sure that this version is all right. (from George Fisher, Saugus, Mass.)*

A: Well, George, much as it pains the Old Game Sawbones to admit it, even *I* make mistakes occasionally. According to Intellivision's Bill Gillis, the version you bought is the final, perfectly all right version. What *does* happen, however, is that companies tweak, and fiddle with their new releases right up until the release date and folks who get advance looks at the results are frequently shocked by how different the ultimate version is. So, although *Boxing* went through several stages before release, once it got into the stores it was finished, complete, etc. — and a very interesting game, to boot.



BOXING

While we're on the subject of errors, let me clear up a couple of other matters that have come to my medical attention. First, I managed to connect Cinematronics, Electrohome and vector graphics in a previous "Q&A" while discussing the x-y type scanning used in coin-op graphics.

The vector graphics system used by Cinematronics, a California company, was privately developed and the rights were sold to Cinematronics. Electrohome is a Canadian company that manufactures all types of specialized monitors.

Finally, my reference to Peter Nelson of Atari's Computer Division somehow came out "Paul Nelson". For these, and all the sins of my past life, *mea culpa.*

Q: *As you know, Atari and Sears made a deal to make Atari VCS's under Sears' name, and that all Atari cartridges fit the Sears system. Now, however, Sears is offering its own exclusive game library. Will these games work on the Atari VCS? (from Kevin Patton, Des Moines, Iowa)*

A: First of all, the Sears Tele-Arcade *is* the Atari VCS in a slightly altered package. Therefore, all VCS compatible software will play on both systems, including those games produced by Atari exclusively for Sears, such as **Stellar Track** and **Steeplechase.**

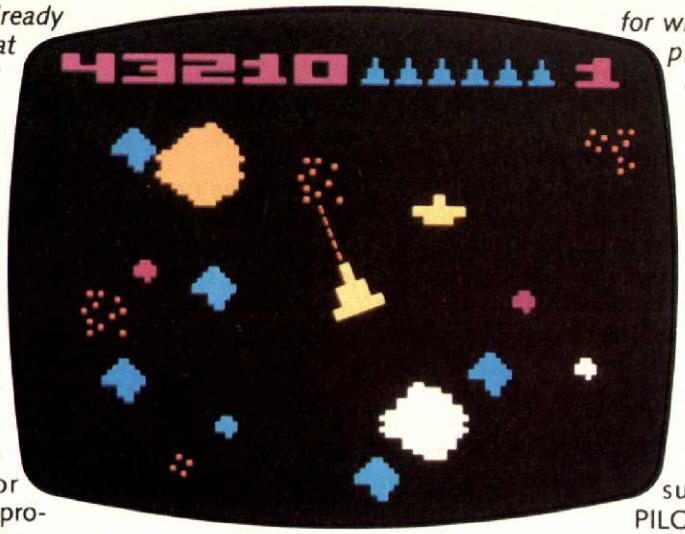
Q: *I'm a professional computer programmer who's also a big gamer and a fan of your magazine. I'm very happy with my job, but I would love to do some "freelance" programming in the*

videogame market. I have already developed a couple of games at work and now that I'm buying an Atari 800, I plan to be creating many more. My problem is that I have nowhere to send my work, and I was wondering if you could help. (from John Zakour, Geneva, N.Y.)

A: A quick skim through the computer magazines should reveal to you dozens of software houses eager to buy good game programs. Adventure, International, for example, has been soliciting programs for the last several years.

Most computer software vendors are of one of two types. Some, like On-Line, do all their work in-house, with programmers on hand at all times. Others act more as publishers, getting in programs over the transom, much as would a book publisher, selecting the best material and then handling the packaging, distribution, etc.

As a last thought, you should contact the Atari Program Exchange (APEX) which serves a similar clearing-house function and distributes games and other programs to all other 400/800 owners.



Q: How come on the Atari VCS the full score on certain cartridges is not shown? On **Space Invaders,** *for example, the score goes from 9,999 to 0000, which makes keeping track of my score very difficult. (from Scott Wagner, Hazlet, N.J.)*

A: When a machine's digit counter has reached the point where another space is needed to update the score, it returns to zero. This is called a "rollover", and good players will even rollover the coin-op games. This is simply a matter of how many digit spaces the game program has —once the limit is exceeded, we start all over again.

Q: I recently purchased an Atari 400, for which I've found several game program listings in various magazines. I'm not much of a programmer yet and I have a lot of trouble converting them to Atari BASIC. Any suggestions? (from Jeff Aiuto, Metuchen, N.J.)

A: They may call it BASIC, but this is a far cry from an easy computer language. Moreover, it is virtually useless for game programming since it offers the designer little in terms of play speed. My suggestion would be to try PILOT (Programmed Instructional Learning Or Teaching) instead of BASIC. This is a language designed for schoolchildren, and even a novice programmer will be turning out fantastic game programs in no time at all.

Otherwise, there are several manuals available on BASIC, from both Atari and independent sources that can help you muddle through.

Q: In the January 18, 1982 issue of **Time** *magazine there is a picture of an unusual* **Pac-Man** *playfield. Is this a new game? If so, when will it appear in arcades? (from Don Chaney, Dallas, Oregon)*

A: In the coin-op business they use the term "knock-off" to describe a boot-

ASTROVISION SYSTEM

leg version of a current coin-op hit. Pirates simply loot the original program, then make either no changes, or only subtle graphic ones, and produce the result in their own cabinets.

At other times, companies such as Midway come to licensing agreements that permit variations in standard game formats. The playfield you saw was one with Midway's sanction, but many machines showing up in the amusement centers are knockoffs. Some of the **Pac-Man** variants include a game in which the dots have become hearts and yet another that features, of all people, Popeye!

Q: *I recently heard that Atari has the home rights to* **Pac-Man** *and* **Defender.** *As an Intellivision owner I was wondering if Mattel will be offering versions of these games as well. (from John Zapala, Chicago, Ill.)*

A: Unfortunately, game licensing today is exclusive. That is, once Atari, for example, buys the home rights to a title such as *Pac-Man,* they own those rights exclusively and no other programmable system can produce

the game under that protected name.

Down the road, we may see these rights assigned on a non-exclusive basis, so that non-compatible systems could each produce an authorized version of especially popular games.

Q: *I was wondering who invented the smash hit* **Pac-Man***? Did one man invent it or did a group? (from Bob Davis, Hoisington, Kansas)*

A: The famous gobbler game was invented in Japan by a company called Namco (which were also responsible for **Galaxian** and a score of other arcade hits. The game was reportedly produced in the traditional Japanese fashion, by a small group of programmers working as a team.

We'd love to devote an edition of "Inside Gaming", for example, to some of these unsung videogame giants, but we'll have to hold off until the Game Doctor brushes up on his Japanese.

Q: *Is the new Atari holographic game,* **Cosmos,** *better than the VCS? How does this system work? (from Larry Galloway, Toledo, Ohio)*

A: Atari's *Cosmos* system was the first mass-market attempt at using holograms, or three-dimensional images. Unfortunately, not even Atari could integrate these magical images into their game play. The result was a rather ordinary tabletop game that showed you a hologram when not actually playing the game. Since Atari doesn't like to release products until they are as close to perfect as they can get them, they have pulled *Cosmos* from their inventory and have postponed it indefinitely.

And that about wraps up this issue's clinic. If there's something you always wanted to know about electronic games, but didn't know whom to ask, why just try a little consultation with the Game Doc here at **EG,** 235 Park Ave. South, N.Y., N.Y. 10003

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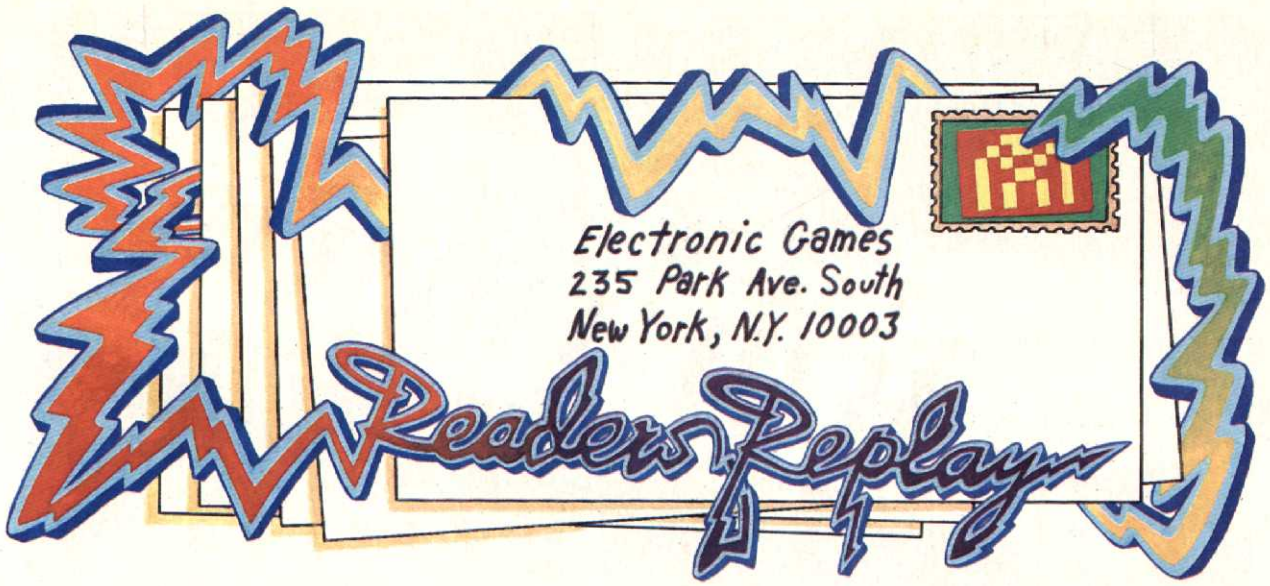


Patching into Activision

My 12-year old son loves your magazine, and he read on page 16 (Winter issue) that a patch would be given if you had 100,000 points on **Laser Blast.** Could you please send us the address of Activision or how we could aquire the patch? Mom has even taken a photo for "proof"!

Mark Kindelspire
Yakima, WA

Ed: Send in that photo and claim your Commander patch from Activision, 32-55-2 Scott Blvd., Santa Clara, CA 95051.

* * *

Where Stands the Astro Arcade?

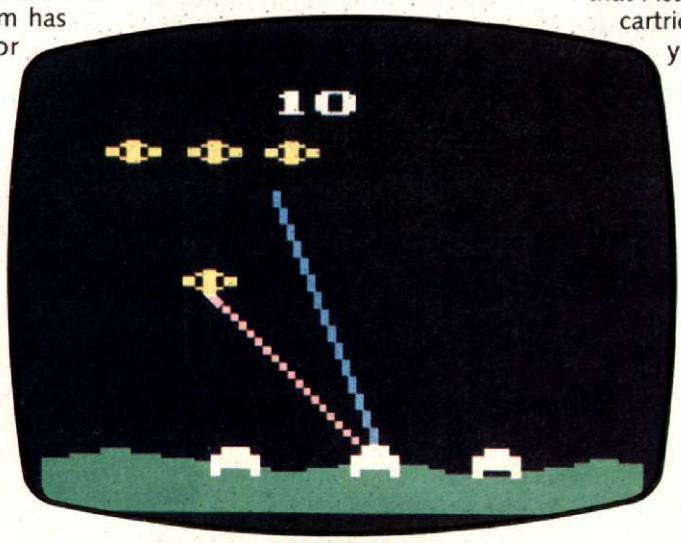
What would you classify the Astro Professional Arcade/Home Computer System as? Is it a videogame system (Atari VCS, Odyssey²) or a computer system? As a previous owner of both an Atari VCS and 0² I feel everything about the Astro, including their controllers, is in a class by itself.

Dan Hayden
Evansville, Ind.

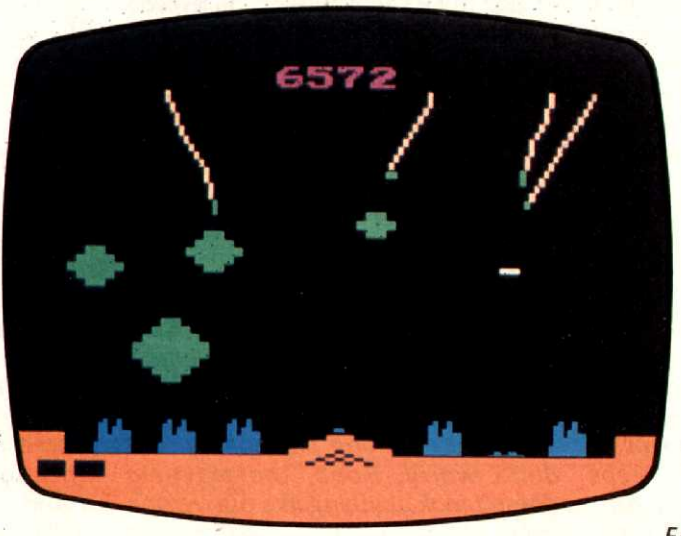
Ed: We classify the Astro Arcade, along with the Intellivision, Coleco-Vision and the new Atari Supersystem as "Senior Programmable Videogames". The VCS, 0² and Zircon Channel F we categorize as "Standard Programmables". And if many more categories start popping up, even **EG** *may run out of classifications!*

An Intellivisionary Speaks!

It took a lot of looking, not to mention a total of over 50 miles of driving, but I finally found your second issue, and it was well worth the hunt.



LASER BLAST



MISSILE COMMAND

As an enthusiastic Intellivisionist, I was overjoyed at the news of the creation of Imagic, thus giving me more cartridges to choose from. Also, I read in a recent issue of "Time" magazine that Activision is planning to produce cartridges for the Intellivision. Could you confirm this? It would be great to see games such as **Freeway** on Intellivision.

Chris Hooks
New London, TX

Ed: Imagic's first Intellivision-compatible piece of game software –a maze-like adventure contest by the looks of it –should be in the stores quite soon, perhaps even as you read this.

On the question of Activision producing Intellivision games, well, if they are it's something they've never divulged to us. Also, so far as we know, none of the current ACTV designers have any experience on the Intellivision. Perhaps down the road a way, but for the present, look toward Imagic and Coleco for new Intel software.

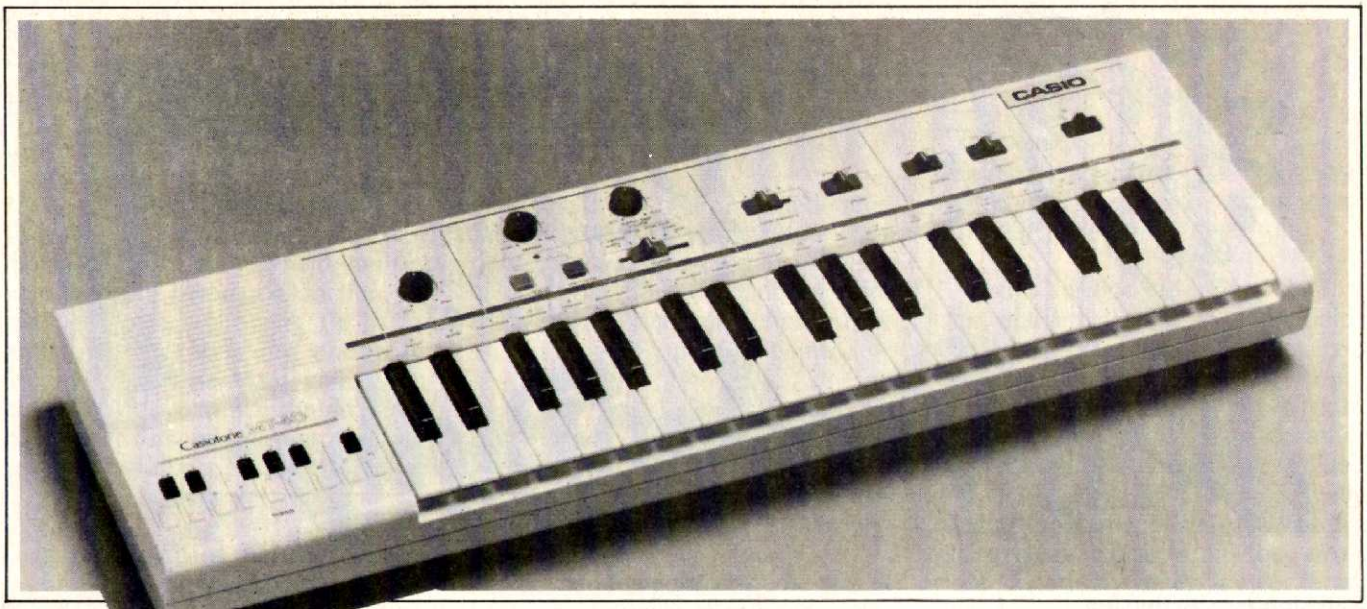
* * *

A Plea For Assistance

Could you please send me a list of names of stores and their locations in Chicago (and suburbs) that sell the Game-Time watch and the Casio **VL-Tone?**

Tyrone Brower
Chicago, ILL

Ed: Unfortunately, due to the



CASIO MT-40

overwhelming (emphasis on "over") deluge of mail requests we get from readers such as yourself, Tyrone, we have come to the conclusion that we can either answer all your queries individually, or we can publish EG on its new, monthly schedule. We've opted for the second alternative, and we hope you folks agree. So please don't feel badly if we aren't able to respond to individual questions.

However, I shouldn't think you'd have too much difficulty in finding the items you mention in your letter. The various game watches are available in many major department stores, as are the fantastic Casio Keyboards (and if) you're intrigued by the VL-Tone, you have got to check out their new models, including the **MT-40.**

* * *

Send in the Kudos!

Kudos to your crew for an excellent magazine dedicated to the arcade addict. I got my 0² for Christmas and have been OD'ing on **UFO, K.C. Munchkin** and their sports cartridges every day since. Does anyone else besides N.A.P. market software for the 0², as Activision does for the Atari VCS?

Dave Tillman
Longview, TX

Ed: As the Odyssey² comes ever closer and closer to the universe of one million systems, the idea of creating compatible software for the 0² will become ever more attractive. Perhaps by the end of 1982, if N.A.P. keeps punching out their market with the efficiency they've demonstrated so far.

Missing: One Hall of Fame

I have enjoyed the first two issues of your great magazine and was glad to read that you are going to be publishing on a bi-monthly basis.

In the coming attractions for the second issue it said that there would be an article about a videogame hall of fame, however, there was no such article in the second issue. Will it be coming up in a future issue?

Stanley Takaki
Chicago, IL

Ed: You've got us, Stan. That feature you mentioned got delayed for an issue or two but, as you've already seen, the Hall of Fame turned up in our fourth issue, and we'll be updating it from time to time.

* * *

The Mysterious Playfield

On page 37 of the March '82 edition of **EG**, there's a picture of the **Space Battle** playfield. The aliens in this picture are vastly different from mine. Have they changed the aliens or what?

Robb Decker
Thomville, OH

Ed: Playfield renderings are generally not photographs of the game in play, but rather are artist's reconstructions. Every once in a while, therefore, the playfield and the actual game are at odds and Mattel's **Space Battle** *is a particularly noticable example. We at EG have even contacted Bill Gillis, Intellivision President, to find out about this seeming discrepancy. But don't worry, Robb, the playfield doesn't look anything like our version either.*

First Issue Blues

Today I bought the second issue of **EG** and I think it's a real blast! I'm very sorry I missed the first issue and was wondering if there is any way that I can buy one? If not, is there any other reader out there who might be able to help me out on this.

Cory Wechaprasit
Chicago, IL

Ed: Keep an eye peeled, Cory, for the upcoming "Back Issues Dept." scheduled to appear in an upcoming issue.

* * *

Ten Years of EG?!?

I found your magazine on the news stand and unfortunately for me it was the Tenth Anniversary Issue. I enjoyed it very much, but since I did miss the earlier issues, and as I saw a reference to a hidden message in **Adventure,** I was wondering if you could tell me how to find it. I'd really love to figure out that message!

Robin Watkins
Raleigh, N.C.

Ed: First of all, Robin, the issue you saw was in honor of the tenth anniversary of home videogames –not EG! We've only been around for a mere five issues. Secondly, and, I hope, sincerely, for the last time, here is the scoop on the secret message in **Adventure:** *there's a secret message, Atari has told us so. They also, however, swore us to silence on revealing how to find it. After all, what good's a treasure hunt when you know exactly where to dig?*

And speaking of secret messages, just read on . . .

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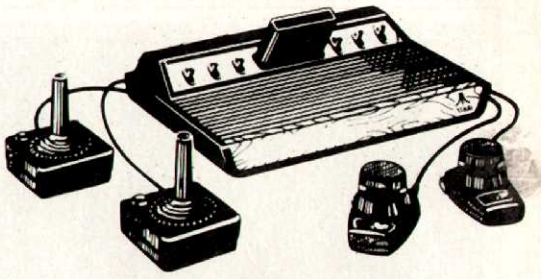

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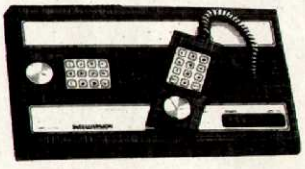

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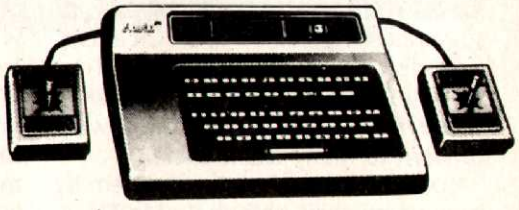

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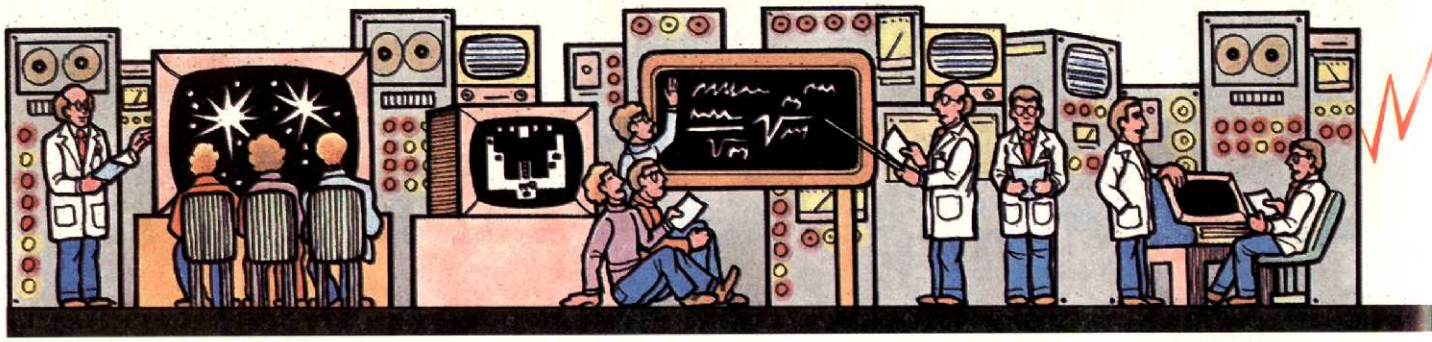

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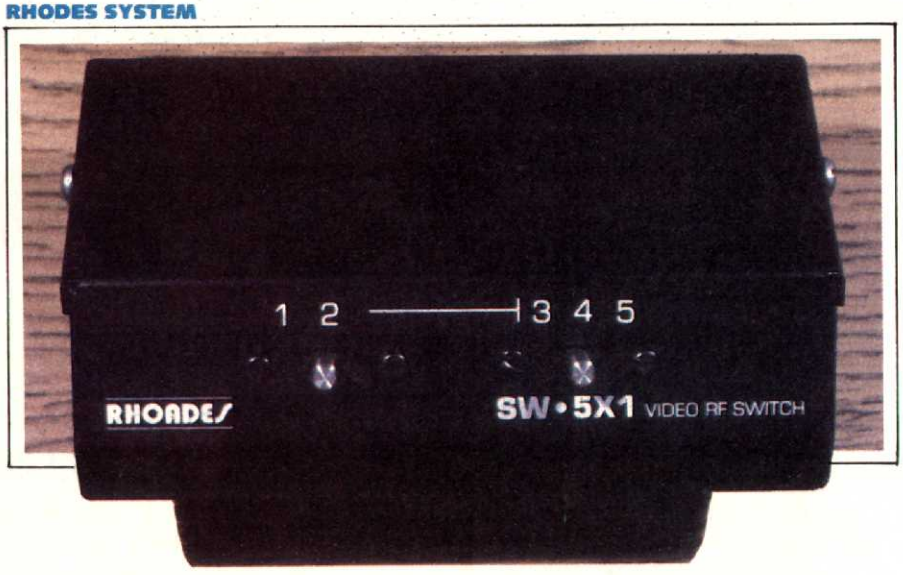


Switch'em — Don't unhitch'em

What to do when you've graduated to a couple of videogames, have cable TV, a VCR and/or videodisk player and own (as we all do) a TV set with only one VHF antenna connector? This is a matter of growing concern to many **EG** readers.

Some people soften the problem by connecting their antenna/cable TV to the VCR, the VCR to their videogame switch (by using a matching transformer called a Balun) and the switch to their television set. If the set has only a 75-ohm input, like most Sony's, a second Balun will be needed. Then by unplugging and plugging their videogame systems as desired, they live with a primitive solution, unwieldly at best and inconvenient at worst.

Other folks, compromise their once excellent VCR or cable signals, which previously entered their TVs directly, but routing them through a Balun to the videogame switch. This switch, not of extremely high quality, is connected to the TV via its 300-ohm twinlead wiring. The result, in some cases, can be very slight to moderate picture distortion depending upon the quality of the VCR or cable signal, the cable converter, and the proximity of the whole system to nearby television transmitters.

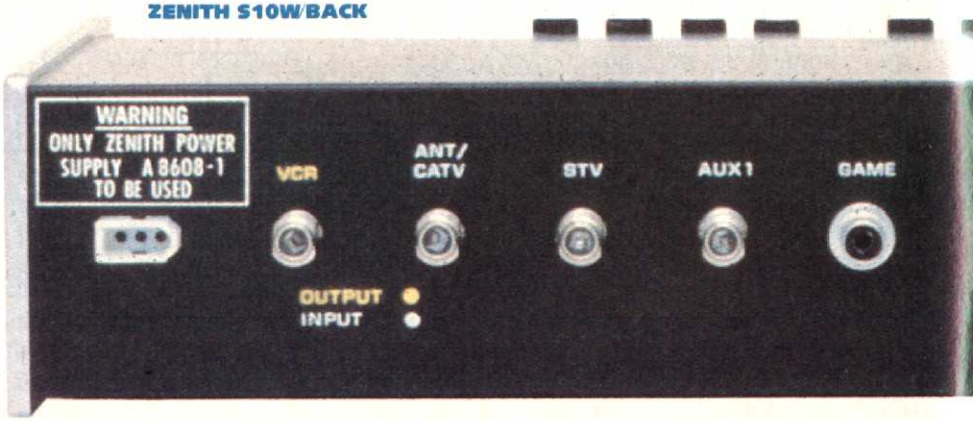
There are many different ways to make video connections. Which of them is really best? Can the hookup be made to operate more conveniently? How can picture integrity be maintained with all these gadgets hooked up and operating?

All video signal generating equipment, whether games, VCRs or disc players, supply their TV signals to your set through a coaxial cable. This shielded wire, unlike twinlead, is designed so that the video signals travelling through it cannot leave the path of the cable and enter the air around the wire. If such spurious radiation were to occur, it could generate interference which might be picked up by nearby TV sets or radios. Similary stray signals which are always present in the air (and that might interfere with the signals coming from the videogames, VCRs or disc players) are kept out of the system by shielded cable.

With just about all videogames and home computers the shielded output cable terminates in what is called a "male RCA connector". This plugs into the "game switch" supplied with the game system, which is in turn connected to the TV set via unshielded 300 Ohm twinlead wiring. Since only a few inches of twinlead are involved, signal interference either outgoing or incoming is held to a minimum.

But why take any chance at all? The answer is simple. Most TVs manufactured up to three or four years ago did not have—or need—75 Ohm input connectors. Cable TV has changed all that. Even today almost all TVs made

ZENITH S10W/BACK



By Henry B. Cohen

TEST LAB

have a 300 Ohm twinlead input while only a few feature the preferred 75 ohm input as well. Sony uses a 75-Ohm input exclusively, which tells us something about the superiority of cabling all the way into the TV set that other manufacturers should note.

Now that we know why shielded cable is preferable for video devices, what exactly do we do about it? More important, how do we properly hookup a number of such devices to our TV sets? Enter video switching.

The simplest form of a respectable video switch is a 75 Ohm A/B switch. This mechanical device, costing from $8.00-$12.00, takes two incoming signals (from any video source) and supplies either of them to a connected TV set. The switch features high isolation (necessary so that the two signals do not interfere with each other) and virtually no signal loss.

This switch is ideal if all you need connect is a single videogame and an antenna or cable TV signal to a single TV set. It is the 75 Ohm equivalent of the game switch that comes with your game console and need only be employed if you are experiencing some signal degradation using the original game switch. This degradation will take the form of wavy lines in the pictures coming from either the video

CABLE WORKS UNIT

game or your antenna. Usually the problem may be sourced to improperly routed connecting wires but sometimes, changing to a completely shielded 75 Ohm switch will solve the problem.

You may also use a number of these switches connected to each other to increase the number of inputs to your TV, but this approach, while workable, soon becomes complex to operate and unwieldy. Signal quality will remain good, however.

Another possible approach is that of connecting the output of your antenna or cable TV signal to your VCR and the

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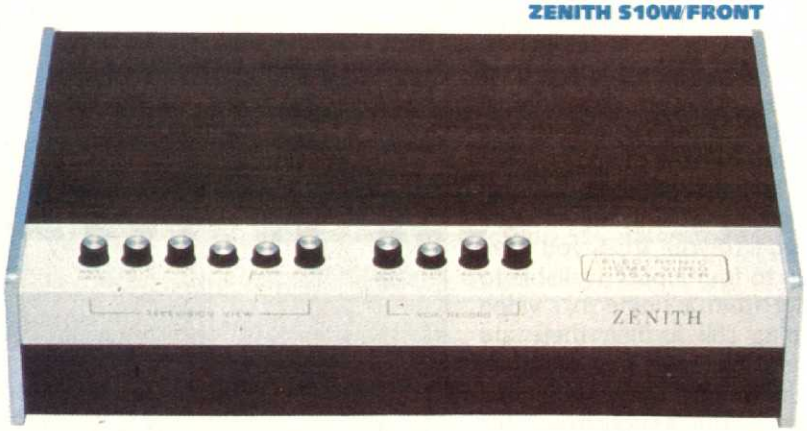


output of your VCR to the A/B switch. Your videogame would be connected to the other input of the switch (by means of a common $2.00 adaptor), and the entire system would then be fully shielded and as interference-free as possible.

But what if you have **two** videogame systems and an antenna or cable TV signal? You will then need more than the simple A/B switch just described. The solution is a 3x1 coaxial switch often called a "three by one video switch". (Note that from this point on all switches we refer to are of the 75 Ohm variety which only work directly with coaxial cable.)

While it may seem that the plot is thickening, it really isn't. The games terminate, as stated, in male RCA connectors, so that an RCA female to "f" male adaptor is needed for each one of them. This readily available part may be found at most video and electronics stores or at Radio Shack (part number 278-255). For a few video switchers a game input is in place and the adaptor will not be necessary. If you're not sure, pick up a few because for the $2.00 they cost, they always seem to come in handy anyway.

All video switches input and output with female "f" connectors. As virtually all VCRs and videodisc players come with "f" connector cables, this makes good sense. To connect the switch or switcher to your television set requires a cable that terminates in two male "f" connectors. Most of the more expensive switchers come with this cable as an included accessory. Otherwise they are available at virtually all video stores and again at the ubiquitous Radio Shack. If, after all this, your TV does not have a 75 Ohm input, you will need a matching transformer (Balun). This $3.00 device screws onto the antenna input of your TV and provides a 75 Ohm female "f" connector input for your video switcher or other input devices.

With a 3x1 switch it is possible to connect two videogames and a third signal source (eg. VCR, cable TV or antenna signal) to the TV. A push of a single button or throw of a toggle will then select the desired input.

In addition, by feeding the antenna or cable signal to your VCR, you have in effect up to four inputs available to your TV set from a single 3x1 video switch. Going still further, there are 4x1, 5x1 and 6x1 switches available. By now, however, they are called **switchers,** not **switches,** for

TEST LAB

reasons that elude this writer. There are also other video switch configurations that allow control of up to five inputs and four outputs at the touch of a button (5x4s). These may switch signals among videogames, disc players, VCRs and TVs as your whims and budget allow, although the cost of these more exotic "matrix" switchers rises rapidly as capabilities increase. A good quality 4x5 mechanical switcher will easily set you back $200.00 or more.

As switching sophistication rises, so, too, does the need for all-electronic switching capability.

Most simple video switches are mechanical devices. They physically connect one signal source to an output connector when the switch is thrown. This design works well enough, in many instances, but it has its drawbacks. Some of the more complex mechanical switchers, due to built-in signal splitters and the proximity of switch contacts to one another, cause a loss of signal strength and may actually bleed some signals into others, causing "crosstalk". This condition produces various forms of video distortion that may be seen on your TV screen. This is not to condemn all mechanical switchers, merely to warn you of a potential problem. Design integrity, quality of construction, and signal strength all play a part in creating or preventing crosstalk.

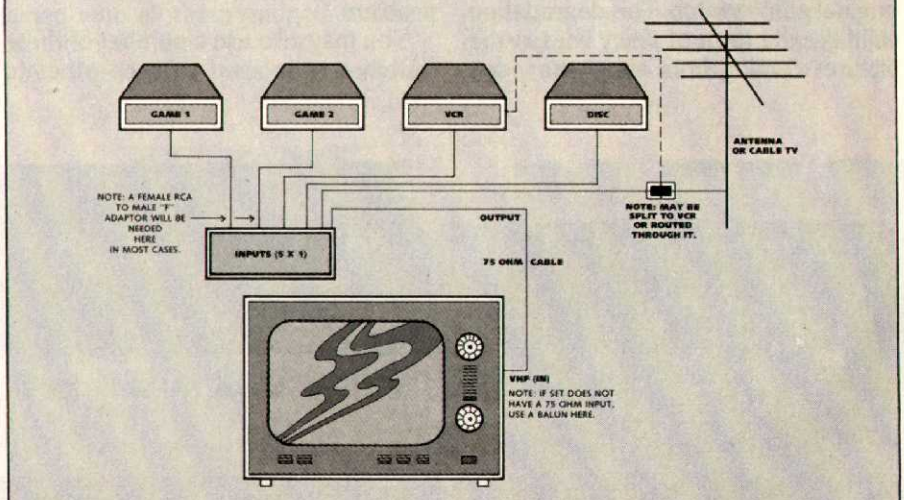
The simplest solution, if you can afford it, is to buy an all-electronic switcher. This is an especially good idea if your needs go beyond a 3x1 design or if you are going to channel the output of the switcher to more than one TV set or VCR.

Nevertheless, for economic reasons, you should try the less expensive mechanical switchers first as long as you may return the product if it does not perform well in your specific installation. There simply is no good rationale for parting with $100.00 if a $10.00-$50.00 switcher will do.

Illustrated here are a number of popular, well known, switching devices. The A/B switch is the industry standard and performs its function flawlessly. The Cableworks, Touch Sensor Four is well known to this writer and can be recommended if it is needed. The Zenith product is the first electronic switcher to be made by a major, established manufacturer and so, if needed should be considered. The Rhoades switchers are of good (5x1) to high quality (4x5) but are expensive compared to some lesser known mechanical switchers. They must be evaluated on their own merits.

Lastly, whether the switches or switchers are called VIDEO or RF switchers makes no difference as these are different names for the same products. Remember that they are all intended to be cabled into your TV or VCR's VHF, *not* UHF input.

WIRING DIAGRAM FOR TWO VIDEOGAMES, A VCR, A DISC PLAYER AND AN ANTENNA OR CABLE TV F CONNECTOR.


GAME 1
GAME 2
VCR
DISC
ANTENNA OR CABLE TV
NOTE: A FEMALE RCA TO MALE "F" ADAPTOR WILL BE NEEDED HERE IN MOST CASES.
INPUTS (5 X 1)
OUTPUT
75 OHM CABLE
NOTE: MAY BE SPLIT TO VCR OR ROUTED THROUGH IT.
VHF (IN)
NOTE: IF SET DOES NOT HAVE A 75 OHM INPUT, USE A BALUN HERE.

THE 5 X 1 SWITCHER SELECTS WHAT IS TO BE SEEN ON THE TV SCREEN. IF A MATRIX SWITCHER IS USED (5x3), SIGNALS COULD ALSO BE ROOTED TO ANOTHER TV SET AND/OR VCR, ETC.

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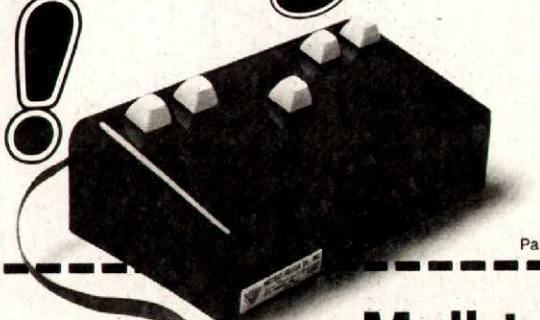

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The History of

By Roger C. Sharpe

It would be easy to assume that everything has been all fun and games for the makers of electronic coin-operated equipment. Well, it hasn't, although many players today don't realize all the problems that have existed over the years.

You may be aware of some recent happenings regarding videogames. The deluge of publicity and even books offering helpful strategy tips for the newest of the new are certainly positive signs. There's also another side, however. For instance, a case still pending in the United States Supreme Court deals with whether a community in Texas can legislate barriers to the operation of videogames.

Let's get away from current events, and take a look behind the machines to see a glimpse of the history responsible for what we enjoy today: the arcades. It's a bit of Americana well worth knowing and a saga of perseverance against what hasn't always been the best of odds.

The coin-machine industry actually traces its roots back to the late 1800's, a world, if you can believe, without movies, television, automobiles, planes, radios, stereos, Walkman cassette players, or even videogames. It doesn't sound too exciting does it? Well, some people alive at that time didn't think so either and they began to explore ways to entertain everybody. The result was the creation of a variety of novelty machines, including fortune tellers, love-testers, mutoscopes (mechanical peep shows that often featured the movements of "hoochie coochie" girls and was far tamer than today's versions), the earliest slot machines, automatic phonographs (ancestor of the jukebox), little dice machines, and games which tested your strength or told your age.

It was hardly an array that would be of much interest today, unless you're an antique machine collector. Yet for the time and the people, it served to start a new industry that suddenly found its inventions in demand. Thousands flocked to the new amusement emporiums that appeared in many major cities around the country offering inexpensive fun for those

Arcades

Whatever Became of the Penny Arcade?

admiring mechanical toys.

After the turn of the century, things really began to flourish at the local penny arcades, so named because of the price of most of their attractions. In fact, men such as Adolph Zukor and Marcus Loew, who were later to be giants in the film industry, based their fortunes on a foundation of pennies from their arcades. Others, too, saw the promise and opened establishments that competed for the audiences of the vaudeville houses and burlesque theaters.

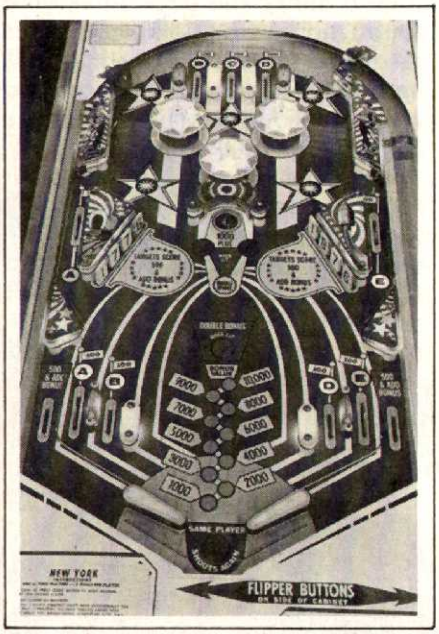
Many games became so popular that they weren't just limited to the arcades, but spread to drugstore, delicatessens, taverns, candy stores, tobacco shops, grocery stores, and any place where a neighborhood merchant could convert a few feet of unused space into a money-making operation. (Sounds similar to today, doesn't it?) Well, as is the case with the current games, the demand for those early models doubled, then doubled again as companies continued to search for the next gimmick that would attract even more people.

The equipment which resulted included almost any invention that could be coin-operated. One destined to have a profound impact, was the pin game. A variation of an earlier game called *bagatelle*, which was really more similar to pool, these small counter-top machines were made of wood with brightly colored playfields that featured small ball bearings and strategically placed pins. Their immediate success helped broaden not only the audience but also provided the basis for a group of individuals to start a totally unique industry.

Even during the Depression, when almost no one or nothing was succeeding, the games somehow managed to find a place for themselves, as well as a following. Maybe not so surprisingly, those closely involved in the business were waiting for the bubble to burst, not willing to believe that

their good fortune could last. David Gottlieb even went so far as to bring out a game called "Five Star Final," with the name inspired by the last edition of his city's *Chicago Tribune*, thinking that, in 1932, it would be the last machine D. Gottlieb & Company would ever produce!

Obviously he was wrong. By the end of the decade, not only were the games more popular than ever, but



they had begun to advance technologically as well as increase in size. This last factor was important, because many of the places which once hosted a counter-top machine or two, could no longer find the necessary space for the newer, larger, and more elaborate devices.

As a result, the majority of machines returned home again to the still-thriving penny arcades, carnivals, amusement parks and the more modern Sportlands. This last setting was to be the beginning of many of today's inner city arcades. In fact, The Broadway Arcade on New York City's 52nd Street (featured in **Electronic Games'** first issue) was at one time a "sportland" that evolved into its present form over the years. Another, no longer in business, was Hubert's Museum on 42nd Street, which not only offered games, but also a small wax museum and a live ammo shooting gallery.

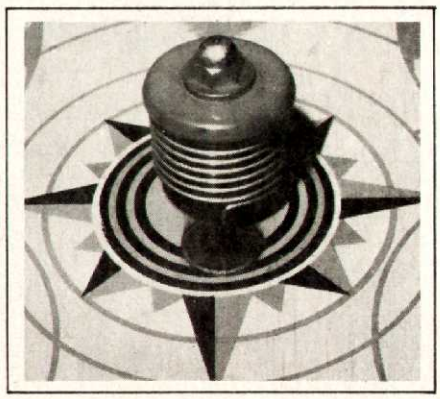
The future was at hand, but other factors were to stop the progress; the United States found itself a principal player in World War II. Suddenly, companies that were once making amusement devices were called into action. Bally, Gottlieb and the others found their production lines turning out war materials for the Armed Forces, with the thought of games a fading memory. From 1942 to 1945, no arcade equipment was manufactured and the growth of locations around the country also suffered. Many closed due to the public's preoccupation with the events in Europe and the Pacific.

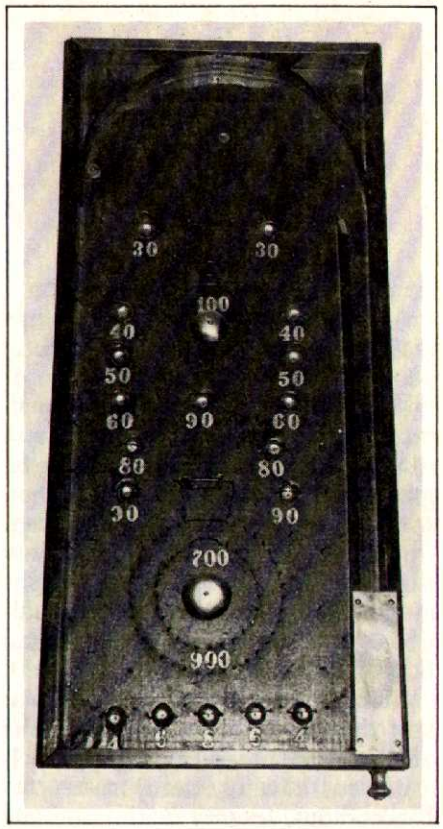
When the war finally did end, many of the companies that had previously enjoyed remarkable success never got back on the track after the forced shutdown. A depleted work force and the cost of changing factory equipment back to the manufacture of amusement games proved too high a price to pay. Some joined forces in an attempt to survive, while visionary men who believed they saw light at the end of the tunnel, created new coin-op powers like Williams Electronics.

However, the road back wasn't an easy one. It wasn't as if the games weren't once more in demand. They were, but the number of showcases for the machines had diminished to the few playlands, amusement parks and seaside or resort locations that had managed to last through the ravages of a World War and the closely following Korean conflict.

Once the coin-machine manufacturers had adjusted to the new demands of the playing public and an advance in technology brought forth the flipper, there still remained the obstacle of where the new games could be placed. This wasn't to appreciably change for almost twenty years, when a different, more modern breed of locations hit the scene.

By the 1960's, pinball machines formed the cornerstone of the world of coin-op devices that also included rifle games, skee-ball, shuffle alleys and





other arcade equipment. The allure of the flipper games, however, opened new doors for coin-machines, especially on college campuses. It wasn't uncommon to find the local bars, grills and other student hang-outs, as well as some University unions, serving up the newest machines for those looking to take a break from school. If nothing else, the games became a neutral ground for students to meet, even if they were from different parts of the country or enrolled in different fields of study. Once in front of the games, everyone was the same and pinball, in particular, found its youngest following since the early days of the industry.

In less than a decade, pinball was riding the crest of a rebirth that propelled the games into the spotlight as a major leisure time attraction. As a result, new arcades opened to meet the increased demand for access to the games. Most were near schools, entertainment areas or business districts, where the traffic could support the business. But another phenomenon was also at hand, changing the way we lived and providing greater opportunity for not only coin-operated games and other forms of entertainment, but also many types of stores.

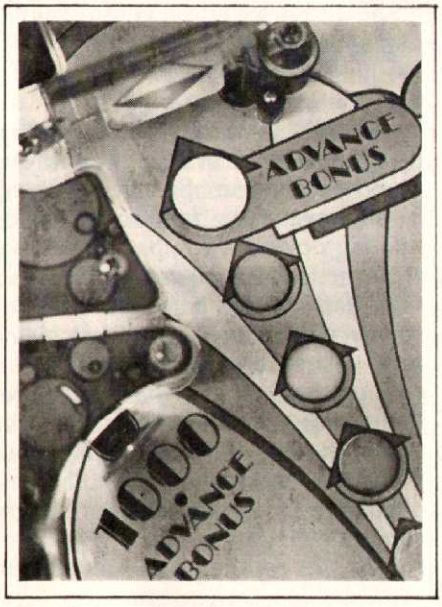
Suburban sprawl was a product of American's desire to own homes and have more space than could be found in the inner city areas. In addition, the population was growing and outlying

areas were needed for development in order to meet the expansion. As the new communities formed, many businesses followed to tap the needs of those not wanting to commute to the nearby city.

Sensing that even more could be provided, astute businessmen began erecting the first shopping centers, where people could go to buy everything from groceries to clothing. The original concept eventually developed into modern multi-level malls. These proved to be a mecca not only for department stores and specialty shops, but also for some new attractions such as restaurants, theaters and even game rooms where parents could drop off their children for a few hours while they did their Saturday shopping.

It became a standard formula. Entertainment was a vital ingredient in the total mix.

In an attempt to fit in with the changing mood of the times, as well as lessen some of the stigma surrounding the games and the types of places one could normally find them, numerous family amusement centers were opened. Even the wording of the name "family amusement center" was important, as operators wanted to separate themselves from the image of the "arcade" and sever links with the past that were, more often than not, negative.



Following this growing trend of the modern game room, with many being opened wherever the population was deemed "right" for the attractions, another source of inspiration came into play. Influenced by the success of fast-food restaurants and other franchise operations were the modern

and highly sophisticated endeavors of the Bally Manufacturing Corp. and Sega of America, a subsidiary of one of Japan's largest manufacturers and operators of arcade games and pinball machines.

Together, their efforts brought us the first viable chains of amusement centers. Sega's Kingdom of Oz, situated on the West Coast and Bally's Aladdin's Castles, predominantly found in the Midwest served as models. Bally now runs 300 such units from coast to coast.

Clean, well-managed and carefully planned to optomize available space, these game rooms represent a new direction for the future of coin-op gaming. For the first time aesthetics rated of equal importance with the games. This way of thinking was also a factor in choosing locations. Even the nature of the equipment demanded a different approach as solid-state electronics exploded into the world of the coin-machine, not only changing pinball, but giving rise to the hero that would carry on the tradition—videogames.

Even as the videogames began elbowing pinball machines for prime space in the amusement centers, operators were attempting to transform game parlors into total environments. Arcading took place in the vast interiors of galaxy-spanning spaceships, cathedrals of sight and sound that rivalled the excitement of the videogames themselves.

Many businessmen with the foresight and financial backing quickly built up small chains of such fun palaces. Operators also focused much more attention on getting the small details of each establishment exactly right.

Even the older, established arcades in major cities made an effort to upgrade the presentation of the games. They had to, if they were to attract the newest generation of electronic arcaders.

Today, despite the legal problems that plague the games in some areas, the amusement centers are still flourishing. You can find machines almost everywhere, including airports, movie theater lobbies, train and bus stations and a variety of other places.

What about the future? Besides the living room where video systems are finding a home, is there anything else on the horizon?

Well, one telling indication of the direction arcades will take, is the fairly recent debut of Bally's Tomfoolery chain and a host of other similar enterprises trying to capitalize on the growing obsession with electronic game machines. What these places are doing is serving up food and fun all under one roof. So if you're hungry and want a bite to eat, why not travel to the local spot where you can play games before, during and after you've satisfied your desire for food.

Admittedly, only time will tell where tomorrow's coin-op videogames will be played, but one thing likely to remain is the legacy of the arcade and its survival over the years. From the beginning, when the attraction was only simplistic mechanical devices, all the way through the era of the micro-chip, they stood as an oasis from the storm and an escape from the reality of the outside world, offering inexpensive forms of entertainment that captivate our interest. That said, it's time for me to hit my local arcade. Anyone have change for a dollar? ⊖

STRATEGY SESSION

Crunch, Quest and Crash Like an Expert!

By Frank Tetro Jr.

K.C. Munchkin/Odyssey/Odyssey²

This gobble game, obviously inspired by Namco's **Pac-Man,** will prove a somewhat bewildering challenge for those arcaders who have mastered "all the patterns" of the coin-op version. **K.C. Munchkin** is a maze chase contest, but its play mechanic—and programmable nature—make it an almost completely different game in terms of strategy. Players maneuver their munchkin through any of a nearly infinite number of mazes in pursuit of 12 moving dots while a voracious trio of "munchers" attempts to chew up the player's character.

Similar to *Pac-Man* are the "power dots" which let the munchkin consume the munchers, and a scrolling escape tunnel through which the munchers travel at only half-speed.

The differences, however, are as significant as the similarities. Twelve dots may not seem like very many, but these aren't fixed objects, they move around. The fewer dots remaining on screen, the faster they move, until the last little morsel is racing around the playfield at breakneck speed. Odyssey has also added a healthy dose of programming flexibility to its maze chase by offering gamers the choice of 10 pre-designed labyrinths and the ability to construct their own, piece by piece!

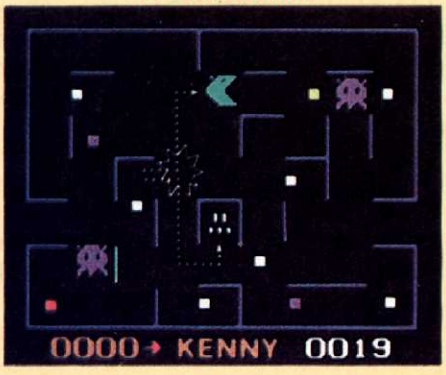
There are several types of mazes, but the major ones are visible and invisible. Movement in the standard maze is obvious, while in the invisible labyrinth, walls can't be seen unless a player's munchkin bumps into one (or stops, by releasing the joystick).

Consume as many of the normal "munchies" as possible before scarfing up the power pill. Wait for at least one muncher to get nearby before gulping it, then spend the following seconds hunting down his companions.

Never leave a power dot for last, since eating it will end that round instantly, precluding you from catching a few vulnerable munchers. When chasing the final munchies, try to get them cornered, trapped in a cul-de-sac where the only exit is right past your munchkin. Most times, the little yummies will dance right into your hungry surrogate's mouth.

Use the escape tunnel whenever

K.C. MUNCHKIN



K.C. MUNCHKIN

K.C. MUNCHKIN

K.C. MUNCHKIN

necessary—remember, the munchers can only negotiate this scrolling passageway at half their normal speed while your munchkin is not similarly encumbered. When a muncher is hot on your trail, a quick trip through the tunnel will provide much-needed breathing room.

Stay out of the corners whenever possible. The munchers here are not exactly flush with bravado and would much prefer to be joined by another fuzzy comrade as a prelude to hemming in and devouring your munchkin. In fact, the munchkins clearly lack the killer instinct and will occasionally astound you by chasing you doggedly through half the maze before simply turning and heading off in another direction.

Another danger area lies near any of the four corral exits. The corral is the box at center screen from which the munchers emerge. Unlike other maze-chase games, however, these fellas don't always leave from the same portion of the pen. The corral acts like a weird, revolving door, opening at the North end for a few seconds before sealing that and opening the East, then South, then West walls. This rotating exit makes for some truly hairy play, with gamers constantly forced to keep aware of which end is up, so to speak.

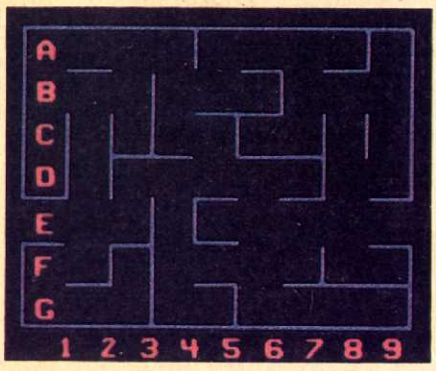
Players seeking a real challenge should try games 3 and 7 (the invisible version of 3). Here, each quarter of the screen is blocked off from the other's by the corral walls. This makes it seem impossible to pass from one sector to the next. The secret, of course, is the munchers' pen. Gamers must have their munchkins enter the corral. The munchkin may balk—they don't exactly thrill to the thought of actually going inside one of those things but be firm. Once inside, simply wait for the wall to the desired sector to open up.

Need I add that you should only do this when the corral is empty? I didn't think so.

For a final bit of variation that you may find interesting, try entering the programming mode and erasing *all* the walls, except for the central corral, which is always on screen. This will allow both the munchkin and munchers—and munchies!—to move with total freedom, without confining maze walls in the way. In this play mode, the game will resemble the coin-op Piranha. But a word of warning, in this mode it is particularly dangerous to get trapped in a corner as the munchers will come at you from all directions. Use the scrolling tunnel as often as you can.

And remember, unlike other games where the player gets three turns, in *K.C. Munchkin*, you've got but one life to live. Live it as a munchkin.

K.C. MUNCHKIN



K.C. MUNCHKIN

Adventure/Atari/Atari VCS

As the gallant knight who must return the enchanted chalice to the gold castle, you will encounter dragons, bats, bridges, keys and other items that will either help or hinder you. (And if you're *very* good, you may even find the secret message, although it has no bearing on the game.)

Adventure has three difficulty levels. Level 1 is a small kingdom, consisting of two castles, two dragons and a labyrinth. This game will always play the same. Level 2 is similar, except that there are three castles and a pesky black bat which will rob you of hard-gained prizes, leaving you either empty-handed, or perhaps with another item in trade (No one in *Adventure*, player or characters, can carry more than one item at a time.)

Level 3 with its random design, is by far the most challenging. It is, in fact, so random that players will occasionally be in the midst of a great game only to suddenly realize that the reason they can't locate, say, the gold key, is because it just randomly happened to get put inside the gold castle—and you think leaving your car keys locked inside the auto is bad! All that can be done at such a time is to take a deep breath and a tug at the old reset toggle.

Once the game begins, the first thing to do is locate the sword. As this is your only weapon against the dragons, any other prize should wait. In games 1 and 2, simply follow the instructions laid down in the accompanying instruction booklet. These games are always the same.

Once you've discovered a key to a castle, go immediately to that castle and unlock it. Once the castle is opened, the key is worthless and may be used as bait for the bat when it's in a frisky mood or is carrying something of value.

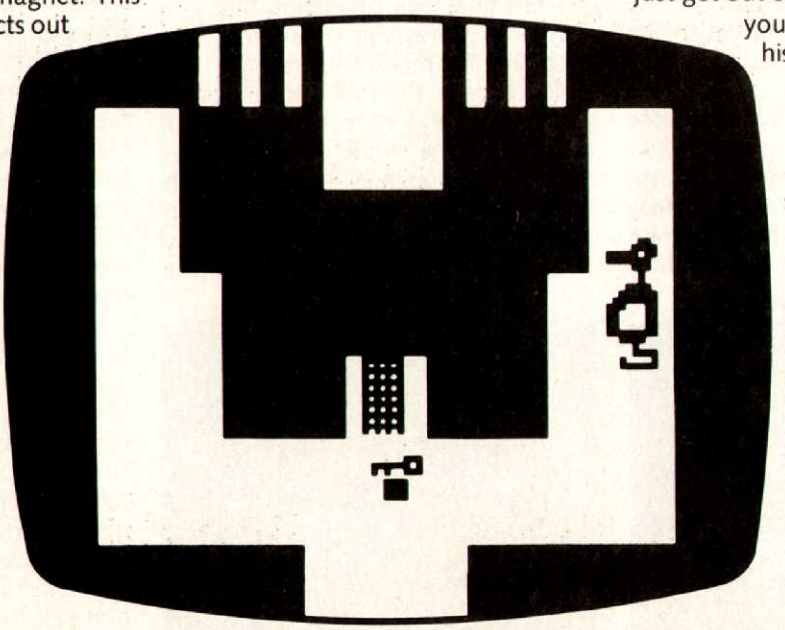
The best way to avoid the bat is to keep moving. If he becomes too much of a nuisance, however, pick him up as you would any other object and carry him into the gold castle and release him. Generally, he won't be able to find his way out.

After locating the sword, slay every dragon in that game variation. If a dragon swallows you, any other dragon you may have killed is reincarnated with you.

The bridge which you'll find in the labyrinth can be a very handy item. Use it whenever needed to cross walls in the maze or catacombs.

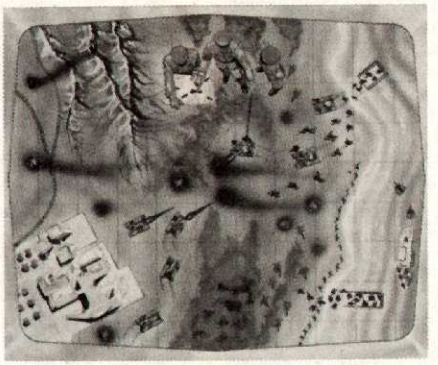
If you should slay a dragon and his carcass blocks your path, bring several other items into the same room. When the number of items reaches three, things will begin blinking and you will be able to pass right through the dragon. This can be done because of the VCS's low screen RAM. Too many objects on screen simultaneously overload its graphic abilities.

Another item available for your use in this magic land is the magnet. This will allow you to pull objects out of the walls, where the bat generally leaves them. But always keep your sword nearby, unless you know all dragons are dead. If you spot a dragon, exit the room immediately and get that dragon-sticker! Also keep in mind that while your on-screen cursor can't travel through walls, the dragons can.



ADVENTURE

STRATEGY SESSION



The chalice will always be found in one of the three castles, so be sure to unlock them all as soon as possible. Though there is no time limit in *Adventure*—or even a clock, for that matter—the quicker a quest is resolved, the less danger will be encountered. Once you've snared that precious grail, head back to your point of origin. Don't forget about Batty, who just loves to pluck the prize from an adventurer mere inches from home.

Match Racer/Gebelli Software/ 16K disk for Atari 400 & 800

Match Racer is the first road-race game available for the Atari computers. Moreover, it offers solitaire and head-to-head options as gamers streak across vertically-scrolling terrain of several types in an effort to put the most miles on the old odometer before crashing once too often and using up your last player "life".

In the one-player variation, the object is to stay on the road and travel as far as possible before cracking up three times. In the two-player mode, drivers actively try to ram one another off the road in addition to making tracks. As the roadside whirls by down the screen, you can steer left, right or to the top of the screen and back down again. As you go, your speed increases from Speed 1 through Speed 4 once you've clocked 40 miles. Using the option key, players can also select a starting speed.

Always try to stay on the blacktop. You can travel over the bumpy, red brick road, but your shaking, rattling vehicle will be much harder to control. You'll also be allowed to pass over the grey oil slicks. If, however, you are in the process of turning when you hit one, your auto will skid right off the road.

The only other obstacle facing players is the puddle before the bridge. This will also cause a skid if turning. Touching anything else—bridges, walls, potholes, pylon gates, diamonds, etc.—will result in a crash and a loss of one life, admittedly, an off-beat play concept for a car racing game.

When driving, always try to stay as low on the playfield as possible. This provides the best possible view of what lies ahead, and will give the maximum time for adjustments. In the two-player version, ram your jalopy into your opponent's in order to knock him into an obstacle. If he looks like he's already headed for a crash, however, just get out of the way and make sure you don't get tangled up in his wreck. Again, stay low on the screen, behind your opponent, allowing him less reaction time. Just remember to steer around him should he crack up.

Okay, then, ladies and gents, grab your crash helmets and rev'er up—but beware of Dead Man's Diamond!

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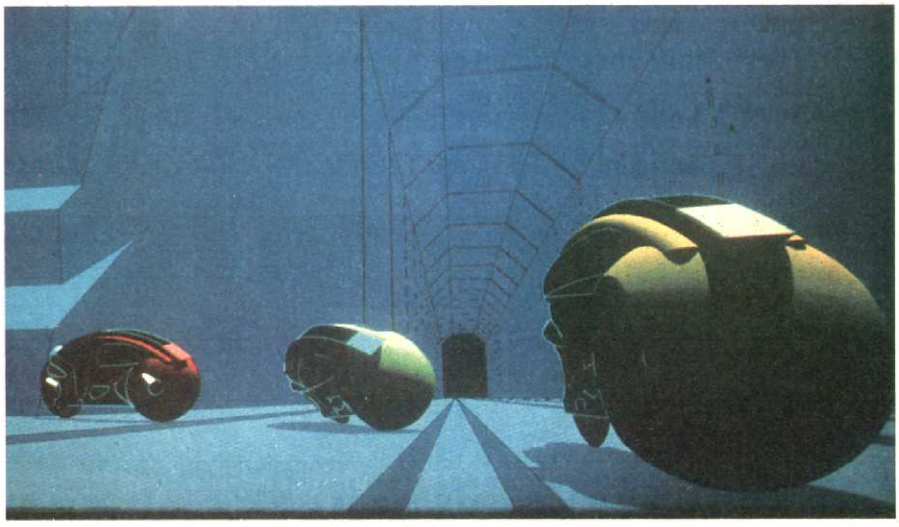
An Exciting Preview of Disney's Videogame Movie

By Les Paul Robley



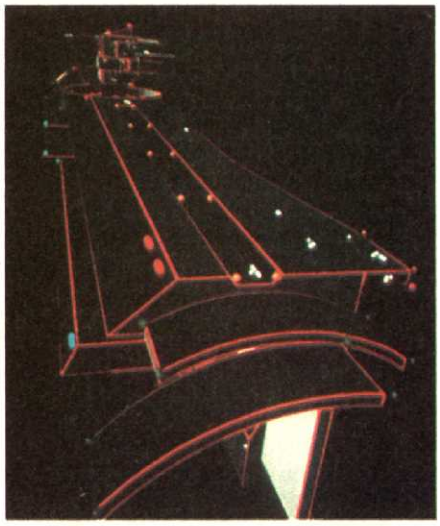
The public's boundless fascination with electronic games has already spawned a vast array of accessories, ranging from the usual T-shirts and bumper stickers to the more esoteric Asteroids chewing gum and "Pac-Man Fever" hit record album. So it was practically inevitable that videogames

The Coming of... TRON

would infiltrate the movie industry sooner or later.

The first studio to make a major effort to ride the coattails of the videogame revolution, if we overlook the computer horror film *Evilspeak*, will be Walt Disney Productions. On July 9, the folks who gave the world *Fantasia* and *Snow White* will release the first videogame-oriented movie to theaters all across the country. *Tron* promises to be the most unusual of all the science fiction blockbusters scheduled for release this summer.

The story of *Tron* concerns a young computer expert named Flynn (played by Jeff Bridges) who is the operator/owner of a local video arcade. He is



seeking incriminating evidence against his former employer, ENCOM, a large conglomerate run by an unscrupulous exec named Dillinger (David Warner), who stole game programs originally devised by Flynn. TRON is the code name of a security program of ENCOM.

Flynn enlists the aid of some old friends who still work for ENCOM (Bruce Boxleitner, Barnard Hughes, and Cindy Morgan), and together they try to crack ENCOM's MCP (Master Control Program). It is at this point that the real-world activities of the film come to an end. Flynn is blasted by a computer security laser that sends him into an electronic nightmare world: a

videogame dimension where the employees of the real-world ENCOM (namely Warner, Boxleitner, and Morgan) are portrayed by their alter-egos in the computer world.

Typifying every electronic gamer's secret dream, Flynn is sentenced to death on the videogame grid—a deadly arena, much like the coin-op videogames in arcades. Tron, the strongest of the electronic warriors (Boxleitner), aids Flynn and together they attempt to defeat the baddies (run by Warner and the MCP) in this voltaic universe.

Michael Bonifer of Disney Studios told Electronic Games that this "electronic world" will be portrayed using a mixture of special photographic effects systems, several of which the company developed exclusively for *Tron.*

One of the techniques is a special backlight photography effect in which the characters will be endowed with an electrified glow, resembling a true computerized figure on a game monitor. But the characters will definitely be human forms; they won't be disfigured into some kind of geometric shape as is typical for an image on a videogame. They will look almost "electronic-human" and their circuitry will intensify depending on the character's moods and emotions. That is, if they get angry the glow will flare. Disney technicians obtain this stunning visual be re-exposing the live action frames through different colored filters. This enables a character to appear to glow and gives the circuitry on his uniform highlights.

The backgrounds will be either painted and backlit or entirely computer-generated. According to Bonifer, ". . . It's really a combination of high-technology optical effects and computer-generated imagery that creates this electronic environment. I guess if you want to come up with one phrase that would characterize the whole thing, you could call it: painting with light."

In a way, then, Disney is employing the same effects philosophy used in *Close Encounter's* light-scan photography of the saucers. They are replacing what had been accomplished in the past with mechanicals and miniatures and creating solids out of various lightsmear techniques. "The main difference here," adds Bonifer, "is that the images in *Tron* are strictly light. No miniatures are involved in any way."

Asked what matting technique would be utilized to marry the foreground characters with their electric environments: blue screen, process photography, or Disney's quite elaborate sodium vapor system, Bonifer explained that none of these traveling matte or rear or front-projection devices will be used. Most of the effects are achieved by hold-out mattes and done "in camera" with several different passes, in order to retain a crisp single-generation look to the visuals.

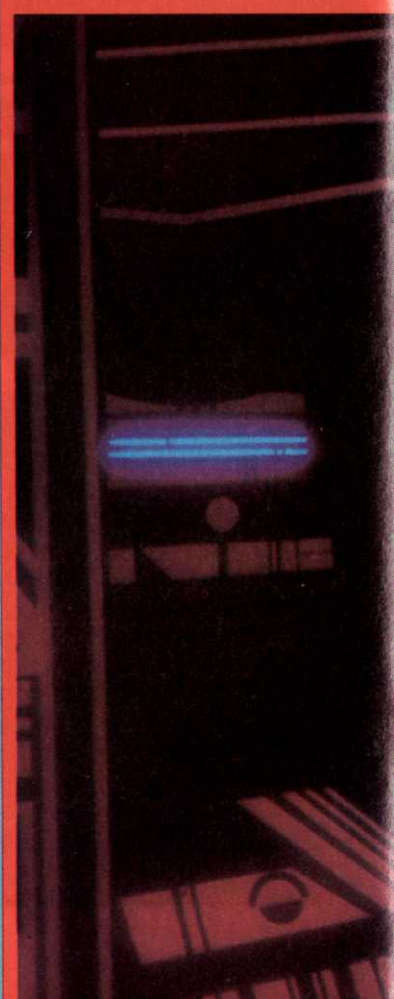
It's appropriate that in order to create this computer-world, the Disney staff went to an actual computer to get it. However, this other dimension doesn't consist merely of a typical computer grid pattern, but will take advantage of the advanced high-tech computer graphics that are available today. Many of the objects and vehicles of this world, like the huge U-shaped police vehicles called Recognizers, or the solar sailer used by Tron and Flynn to battle Sark's (Warner) flying aircraft carrier on the Sea of Simulation, will take the form of computer-generated images.

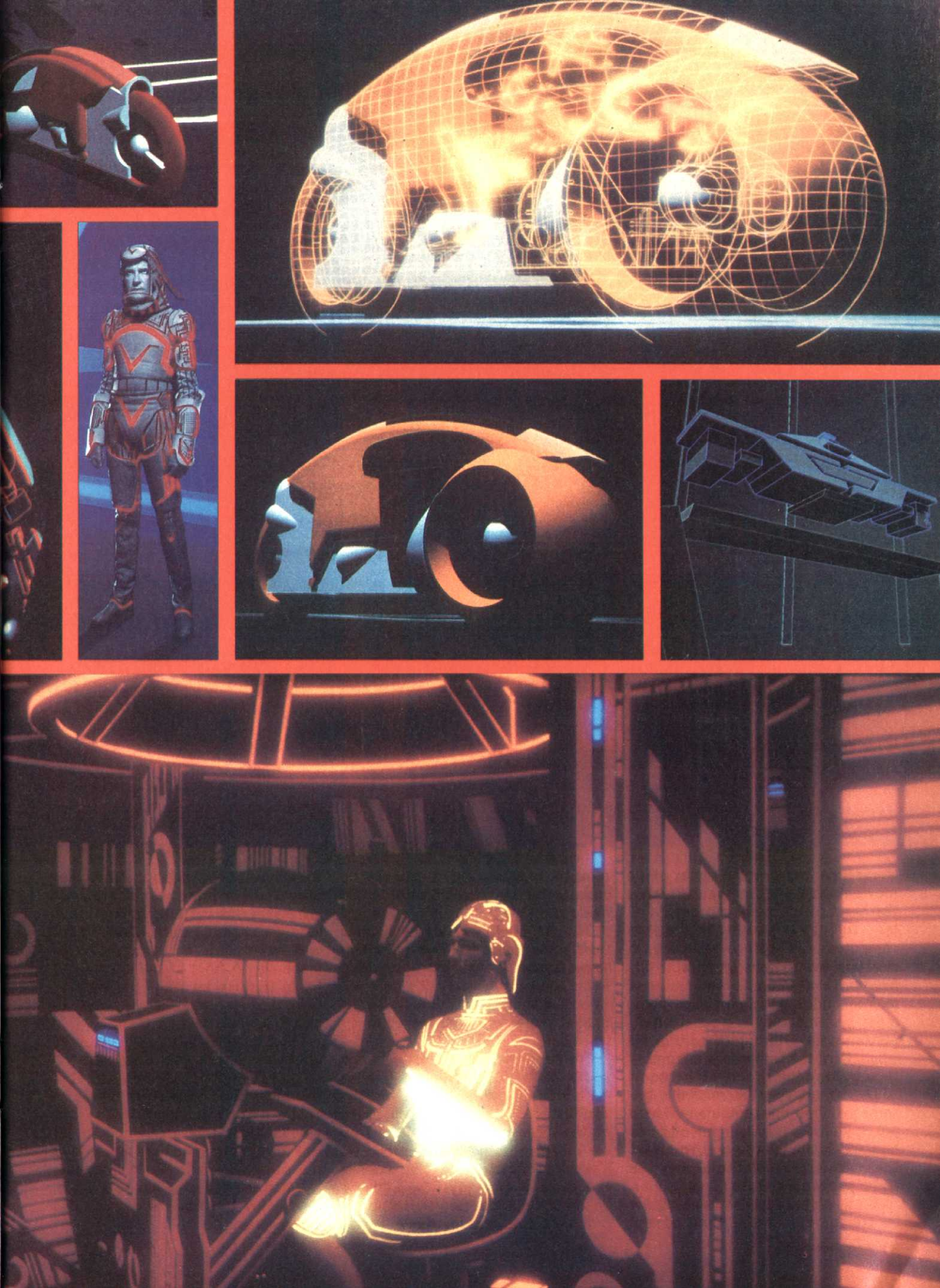
Some may be wondering if this new dimension will utilize current popular arcade game graphics such as found in **Pac-Man, Venture** or **Asteroids.**

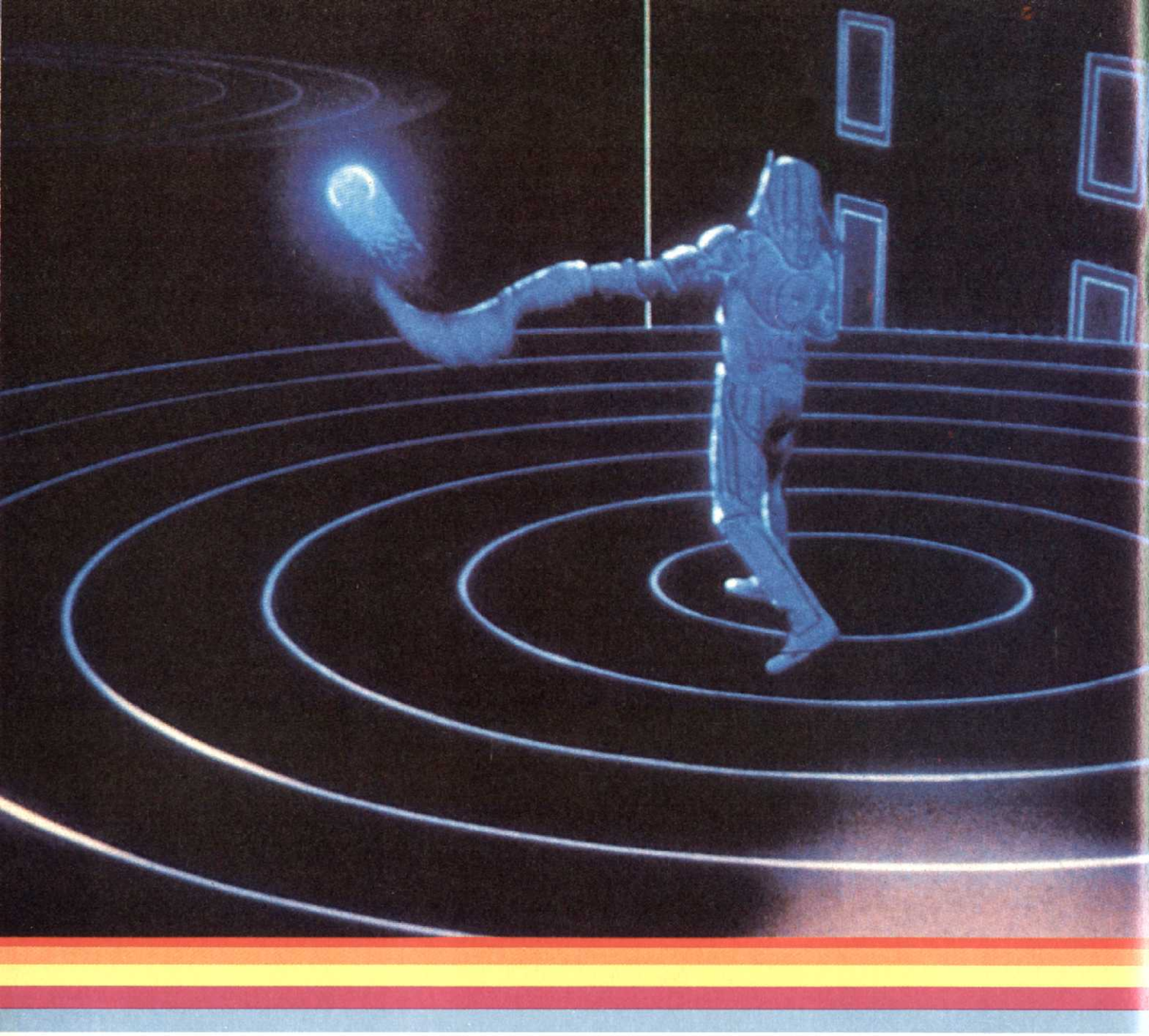
The answer is, "No". There will be elements of games that viewers will undoubtedly recognize, but nothing that relates exactly.

Disney is also making a smart move on the merchandising end of things. Not only will the studio cash in directly on the success of the videogame phenomenon, but three manufacturers have made commitments to produce coin-ops, hand-helds, and home videogame versions of certain sequences in *Tron.* Mattel Electronics announced two home versions of the movie at the January CES, tentatively titled **Tron I** and **Tron II.** They will be available in cartridge form for the Intellivision. The games will involve related plot and character elements from the film and, for all those solitaire-hungry Intellivision owners, are strictly one-player contests.

The first evolved out of a sequence in the movie in which Tron is pitted against the Evil Blue Warriors on the game grid. The computer-controlled EBWs hurl lethal frisbee-like identity discs at him, and the arcader must maneuver Tron to catch them all without fail. The action gets rougher when they next proceed to ricochet them off of mirrors before sending them in his direction.







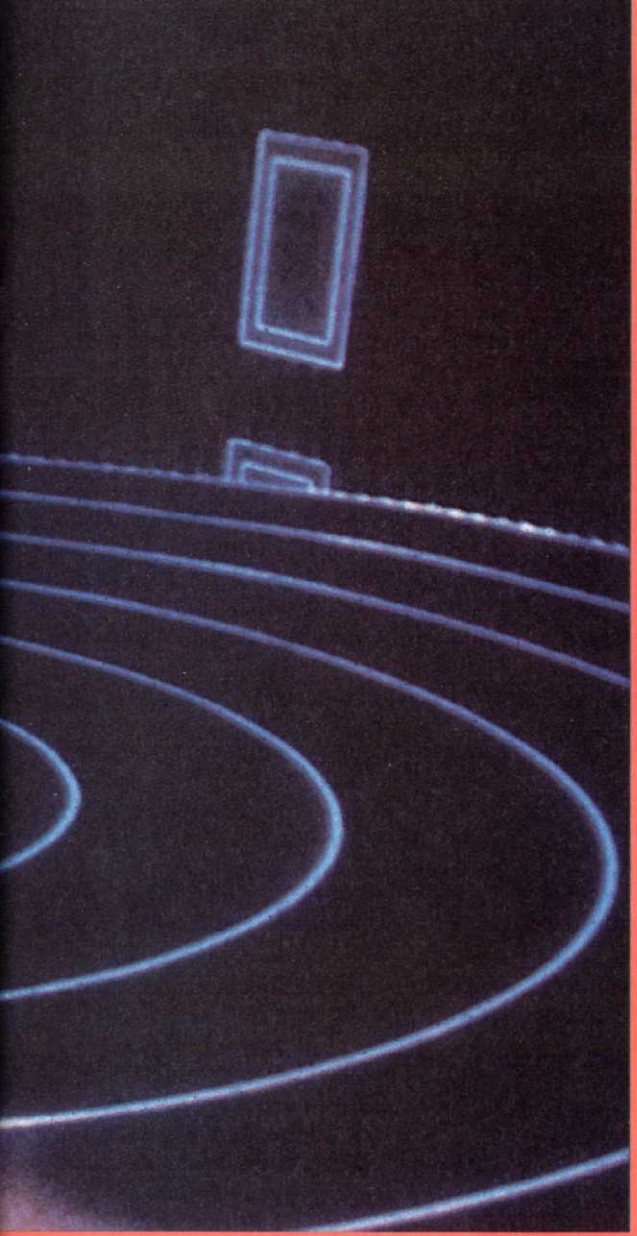
Tron II derives from the climax of the movie in which the Tron figure reaches the heart of the MCP computer system. The object is to disable the alien computer's CPU before it succeeds in disabling Tron. This is a decidedly difficult task as anyone possessing a remote understanding of alien computer systems knows. Your Tron figure must travel through the electronic labyrinth of the computer's integrated circuitry, and the closer you get to its CPU, the angrier the machine becomes. At times the computer will send out spider-like "messenger bits" to find and battle your figure. You must avoid these as, all the while, the game's speed increases.

Mattel plans to have these available to consumers at the time of the movie's release. The prices will be comparable with those of other Intellivision cartridges.

The handheld version will come from Tomy, called the **Tomytronics Tron Game.** It's the first movie tie-in in the company's history. It's expected to sell for about $50.00 and be on the market shortly after the film's July release date.

The handheld will be a three-in-one game, each possessing a FIP (Florescent Indicating Panel) color display. The first is a "light cycle" game based on the scene in which Flynn and Tron are escaping from the Grid arena via electronic motorcycles. You control the cycle with a joystick, and the enemy cycle is directed by the computer. As the vehicles move along, they leave trails of lights that turn into walls. If the enemy cycle you are chasing makes a sharp turn, you must follow suit or you'll crash into his light wall and explode. It is also possible to maneuver in front of the enemy and try to trip him up with your walls of light. It is very similar, by the way, to Bally/Midway's coin-op Tron.

Once the enemy cycle crashes three times, the screen goes blank and the second game appears. Also taken from the movie and somewhat similar to Mattel's *Tron I*, this game involves the identity discs that Tron hurls at his warrior-opponent on the game grid. If the computer-controlled warrior fails to catch the deflected disc four times, Tron wins the bout and game #3 commences.



This is Tron's confrontation with the dreaded MCP. As in game #2, Tron is again on the left of the screen and the MCP is on the right, guarded by barriers that move up and down. You must time the release of Tron's identity disc with the movement of the barriers and place it dead center into the vulnerable "neck" portion of the MCP. When this occurs, Tron wins the third game and the computer reverts back to #1, but with increased speed.

Tomy is also creating four 3¾-inch articulated figures from the movie plus a light cycle for them to ride.

For those **EG** readers who are concerned over the bad PR the computer seems to be receiving from this film, don't worry. Bonifer says: "*Tron* is not an anti-computer story. It's not the computer as evil and the people as good guys. *Tron* is about the fantasy world that exists inside the circuitry of a computer. There are, as in any environment, good and bad elements within that circuitry or micro-universe. The computer here is shown merely as a reflection of the world around it—an extension and tool of the human intelligence."

By Bill Kunkel

You'll Get a Kick Out of Kick!

Kick/Midway

Originally entitled *Kick*, **Kickman** gives trackball-spinning arcaders a chance to control a clown riding a unicycle in the middle of a balloon storm. Sound a little strange, my quarter-clutching comrades? Perhaps, but the wacky scenario is only part of the fun in this wild new Midway videogame.

Players control the cycle's horizontal movement as it lurches back and forth across a beautifully rendered cityscape. Suddenly, vividly-colored balloons begin floating down from the top of the playfield. The clown is wearing a hat with a tiny pin on top of it, and it's his job to see that none of the balloons touch the ground.

In the first wave, the task is easily accomplished. Simply allowing the balloons to land on the clown's head bursts them. With the second round, however, things get complicated. Now the balloons no longer break. They simply pile up on bozo's dome, and eventually form a multicolored column, much like a faceless totem pole.

As the pace increases, players will want to call their secret weapon into play. There's a special "kick" button on the game's console that lets arcaders boot the occasional stray balloon back into the air where they have a second chance at balancing it on the clown's cranium. Pretty soon, some familiar faces start to show up. First, the **Pac-Man** gobbler appears, just in time to do his thing and chomp the tower of balloons perched precariously on your harlequin's head. Later on, gobbie's side-"kicks", the goblins, also put in cameo appearances and must be caught just like the balloons.

While I'm not entirely convinced that the trackball is the ideal type of controller for this particular game, this is a minor quibble. This is one of the most delightful new games to appear in months, with its gorgeous, Walt Disney-style graphics and singular sound effects.

Space Duel/Atari

Space Duel is, essentially, a color version of **Asteroids.** The word "essentially" must be emphasized, however, for this new game is also much more. Utilizing the magnificent color Quadrascan graphics seen previously in **Tempest,** *Space Duel* lights up the arcade firmament with a cascade of three-dimensional shapes—cubes, pyramids and spheres float through the star-specked playfield while arcaders pilot a laser-equipped star cruiser to destroy them.

Unlike **Asteroids,** play sequences do not begin with the player's ship at center screen, but rather in a corner of the playfield. This renders the traditional *Asteroids* strategy of remaining in the middle of the playfield useless and requires the gamer to almost immediately pilot the ship out of the deadly, boxed-in coffin corner.

Arcaders are provided with the defensive weapon deluxe—a virtually invulnerable force field that can be thrown up at an instant's notice. As with *Asteroids,* when a bit of space geometry is hit, it divides into smaller parts which must also be eliminated. If anything, in fact, *Space Duel* is *too* simple. The force field can be held on for long periods of time, and in most cases the floating configurations make even easier targets than the space rocks of *Asteroids.* Certainly, any player who does well at **Deluxe Asteroids** will be able to engage in this *Space Duel* for looooooooooong periods of time. The majority of us, however, will hardly complain about being able to last a little longer at such an enjoyable contest.

Graphically, this game is miles beyond its inspiration. The three-dimensional, colored crystal imagery will delight **Battlezone** fans, as will the splendid, multicolored explosions.

KICKMAN

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The movement through space is smooth and languid, and the firing angles are nearly perfect. This is such an outstanding update of a classic play mechanic that even those gamers who never got into the original should definitely check out its shiny, new descendant.

Mouse Trap/Exidy

"Build a better mousetrap," they say, "and the world will beat a path to your door." So Exidy discovered when the California coin-op manufacturer turned out this cute maze-chase number.

Exidy is one of the few American coin-op companies that does all its own R&D—that's Research and Developement. That means the company designs its own games like its big neighbor Atari, rather than buying U.S. rights to Japanese-developed titles. This independence, in the past, has led to some truly innovative games such as **Venture,** the first fantasy quest-oriented coin-op.

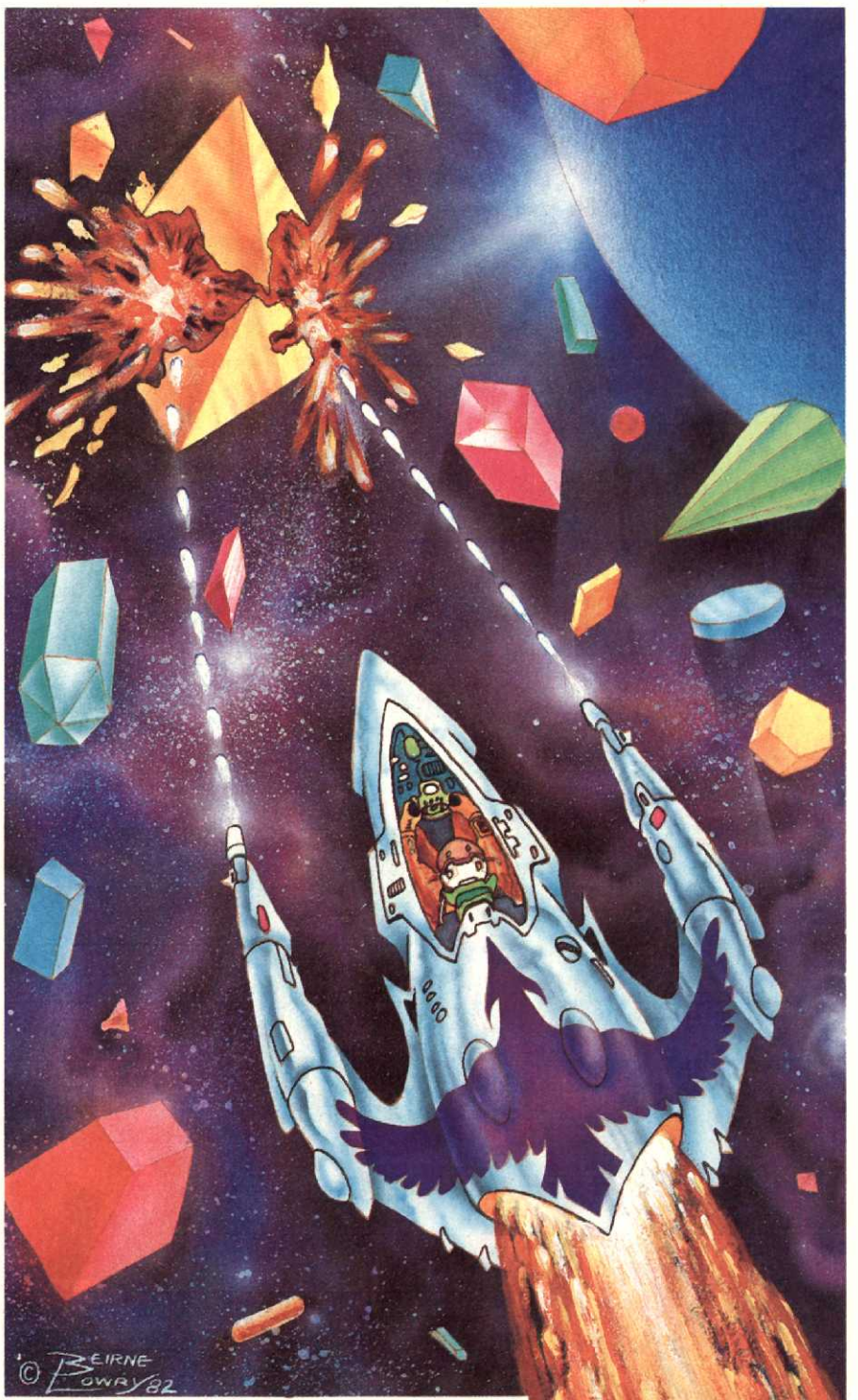
Players control mice, who begin their lab-like adventure at the center of a maze. The mice must move through the maze, eating up tiny pieces of cheese, while avoiding the labyrinth's many menaces.

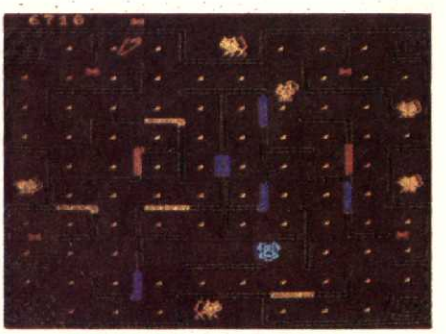
After mastering the basic play mechanics, gamers can start to take advantage of the game's many unique features. For example, there are dog bones located in each of the playfield's four corners, much like the power pills in *Pac-Man.* These bones turn the mouse into a barking, ferocious dog capable of mangling even the fiercest feline. Not only that, the transformation need not occur at the precise instant the mouse eats the bone. Instead, the rodent can devour the power-bone and remain a mouse until the player feels the transformation will be most useful. At that instant, the player hits the special "dog" button on the game console, effecting a time-delayed metamorphosis.

Then there are the color-coded trap-doors. The console has a trio of buttons, red, green and blue, that correspond to similarly colored doors in the playfield maze. By pressing the red button, it is possible for the mouse to pass through the red door. Clever and sparing use of these doorways will prove to be the most significant part of your strategic repertoire.

Once the going gets tough, expect to see the hunting hawk turn up on screen. As wildlife fanciers know, hawks just *love* little mousies for dinner, and these hawks are so smart they'll pick off your wretched rodent before you can exclaim "Holy Tom & Jerry!" Your only hope is to make the smart hawk a dumb hawk. This is accomplished by traveling through the maze to its center. The hawk will immediately lose all his tracking instinct—not to mention his appetite.

Mouse Trap is a cute item that should amuse players as much with its unfamiliar elements as with its familiar ones.





MOUSE TRAP PLAYFIELD

Zaxxon/Sega-Gremlin

Sega's **Zaxxon** is much like the most beautiful woman in the world who suddenly, when she opens her mouth to speak, reveals all the feminine grace of a Brooklyn gangster.

Zaxxon's graphics are perhaps the ultimate in space war visuals, guaranteed to blow the doors off even the most hard-to-please arcader. Gamers man spaceships and pilot them over a three-phase scenario that takes them from the surface of a floating space fortress bristling with anti-aircraft weaponry, into deep space for a confrontation with the base's protective fleet and, ultimately, into battle with *Zaxxon* himself, a behemoth war robot capable of firing deadly heat-seeking missiles. Defeat this sucker and you win the right to start all over again.

The stupendous graphics are viewed from an eerie three-quarter overview, giving the player an excellent view of the landscape. Unhappily, this same perspective makes the game difficult, if not impossible, to actually play. Stealing a move from Activision's home videogame, **Tennis,** the player's ship casts a shadow on the ground as it passes over its targets. This, coupled with an altitude-gauge on the left side of the playfield, is intended to provide the arcader with sufficient visual cues for guiding the craft over the fortress walls and past defensive missiles. In this task, it is totally inadequate. Most gamers will simply crash their ship into the protective wall three times in a row, unable to calculate the proper trajectory. After tossing several quarters down the gullet of *Zaxxon,* this brief, but breathtaking exercise in self-destruction may begin to pall on the average player, causing him to simply walk away in disgust. (In the space sequence, naturally, there's not even a shadow!)

All of which is truly a shame, since the graphics here are well worth a few dollars just for the show. After all, how many other videogames boast huge, 3-D warrior robots, vistas of alien terrain straight out of science-fiction artist Frank R. Paul and incredibly detailed depots and surface to air missiles? Unfortunately, however, even once the game is mastered—and jet fighter pilots have told us they were unable to do *that*—it just isn't much fun to play.

Again, the problem is one of perspective. A rising anti-aircraft missile seems dead ahead, the gamer fires and the shot seems to go right through its target.

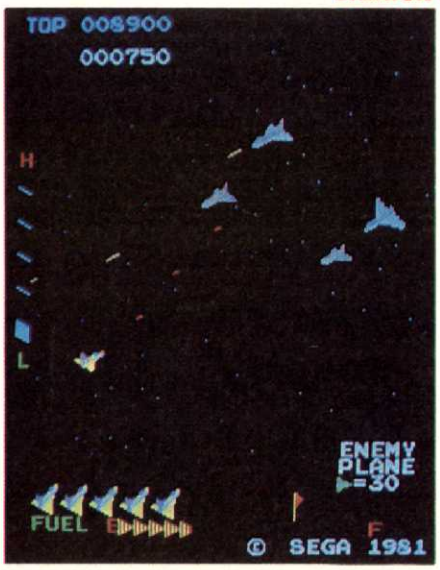
But jeepers creepers, it sure is *pretty* to look at!

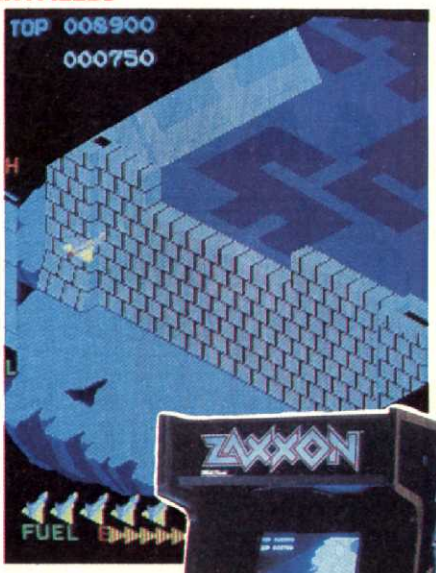
BARRACUDA

Barracuda/Coinex

Coinex is a Canadian videogame company, and *Barracuda*, quite frankly, is a combination of the **Pac-Man** maze and the visual elements from **Piranha.** Gamers control a ravenous big-toothed fishie around a

ZAXXON PLAYFIELDS





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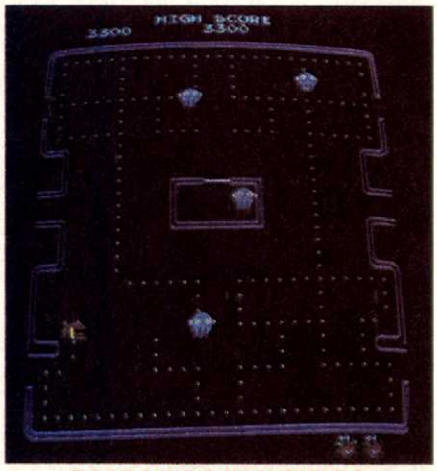
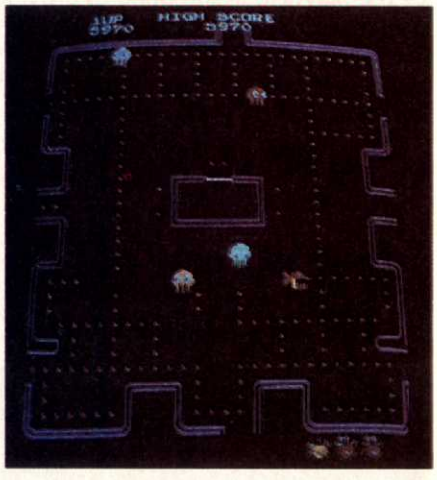
maze, gobbling dots, while being chased by a gang of four sea monsters. The sea monsters can, in turn, be eaten by the barracuda after he consumes one of the four seashells located in the playfield corners (now where have we seen this play mechanic before?).

Play is very smooth, with Coinex adding several of the extra trappings available on the "souped-up" (usually) without Midway's permission) versions of *Pac-Man.* The machine offers disappearing maze-lines (they go



BARRACUDA PLAYFIELDS



bye-bye whenever the fish eats a seashell) and six scrolling points (that is, three tunnels, as opposed to *Pac-Man's* one). In addition, there are several speed-up levels for both barracuda and sea monsters.

Not being legal eagles, we are not aware of the laws governing the creation of coin-op videogames outside the United States. Presumably, Coinex, being a Canadian company, is exempt from the sort of litigation that would invariably descend upon this game were it to be issued in the states. Nonetheless, this comes pretty close to being a knock-off. Still, it clearly has

been granted a copyright and has trademark protection from Canada. The graphics are cute and the play is slick. We'll leave the lawsuits to others.

BARRACUDA UPRIGHT

Taken strictly as a game, therefore, *Barracuda* is a fine product, incorporating ravenous, multi-colored fishies, "deluxe" style bells and whistles.

Alpine Ski/Taito

While sports-oriented videogames have not been big coin-op subjects in the past, Taito is literally racing along in an attempt to make up for the slack. Instead of concentrating on team contests, however, which take too long to play, the folks who brought us **Space Invaders** and **Qix** have opted for solitaire sports simulations, their first entries being **Grand Champion,** an auto race program, and **Alpine Ski,** the ultimate in whizzing down those computer-generated snow-slopes.

Players begin by being taken uphill via a ski-lift. Using a heavy-duty joystick for directional guidance and accelerator button to generate speed, action starts off with a downhill race. Trees, ice and even other skiers are the major obstacles, but those ice ponds, when navigated, are good for bonus points. Completing the course with time left on the clock even makes you eligible for the slalom, where poles must be cornered with considerable skill in order to reach the finish line.

Complete the slalom and *still* have time left over and you qualify for the one-shot ski jump!

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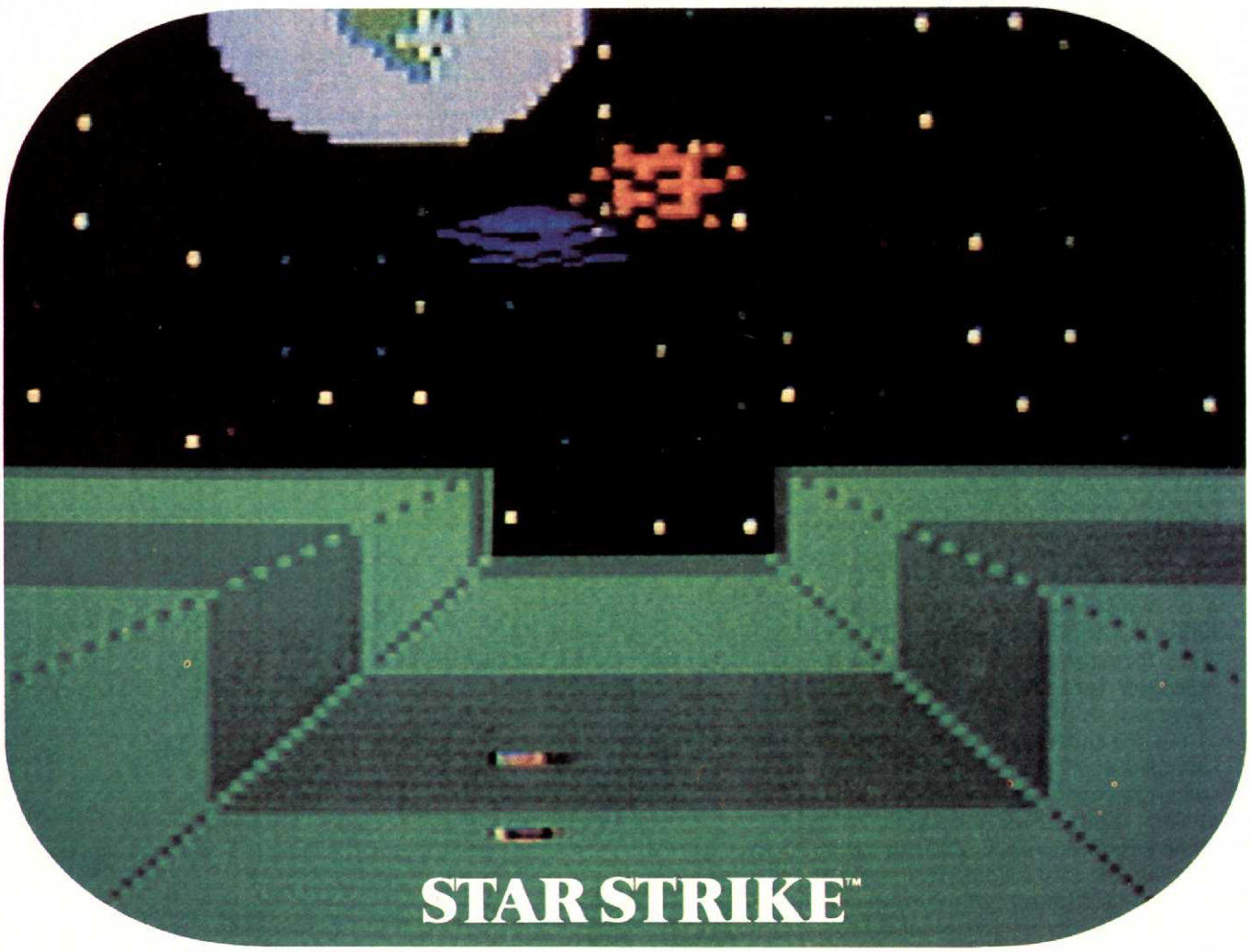

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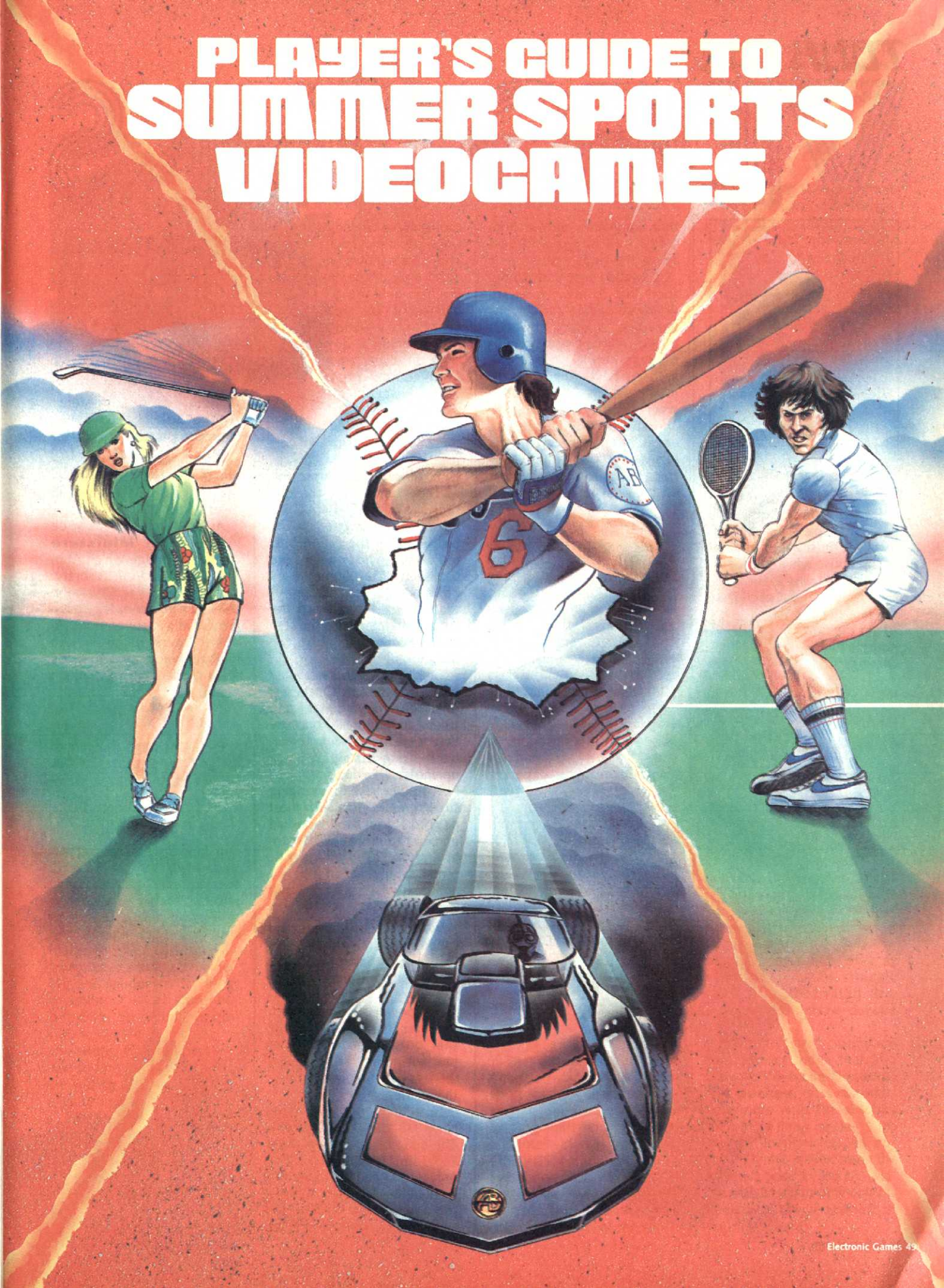

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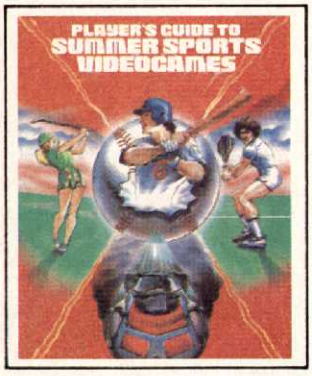


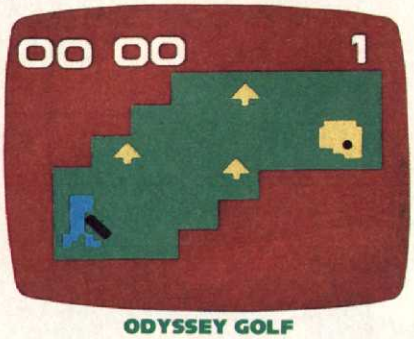
Chasing the Little White Ball

Pity the poor duffer. To enjoy a simple game of golf, he or she must get up and out of the house while the morning mists still cling to the trees, lug a heavy bag full of clubs to the first tee and then spend the next hour or two chasing that sometimes elusive little white ball hither and yon across the landscape.

It's quite a testimony to the sport that so many folks are willing to endure such inconvenience to participate. Of course, golf-loving owners of programmable videogame systems have things much, much easier. They get up whenever they want, plug the appropriate cartridge into the console and—presto!—the world of fairways and sand traps bursts forth in full color on the screen.

Odyssey's Golf

This one-to-four player game set new standards for electronic golf simulations when Odyssey released it in 1979. Its greatest virtue, one which subsequent golf cartridges have copied, is the use of dual playfields. The screen shows an aerial view of the entire hole until the ball reaches the area near the hole—and then switches to a close-up of the green for the putting phase.



ODYSSEY GOLF

The mechanics of play are easily mastered, though it takes the usual amount of practice to learn how to execute. The arcader uses the joystick to position the on-screen swinger so that the head of the club overlaps the ball. Pressing the action button on the joystick begins the backswing. The bigger the arc of this wind-up, the further the ball will travel when the button is released and the club comes forward to strike the ball.

Each of the course's nine holes is different. Obstacles, principally rough terrain and trees, add interest, because they force the player to put on his thinking cap when lining up shots.

The holes have pars ranging from three to five, with most pegged at four strokes. Skilled gamers should be able to score in the low 30's fairly consistently.

Atari's Golf

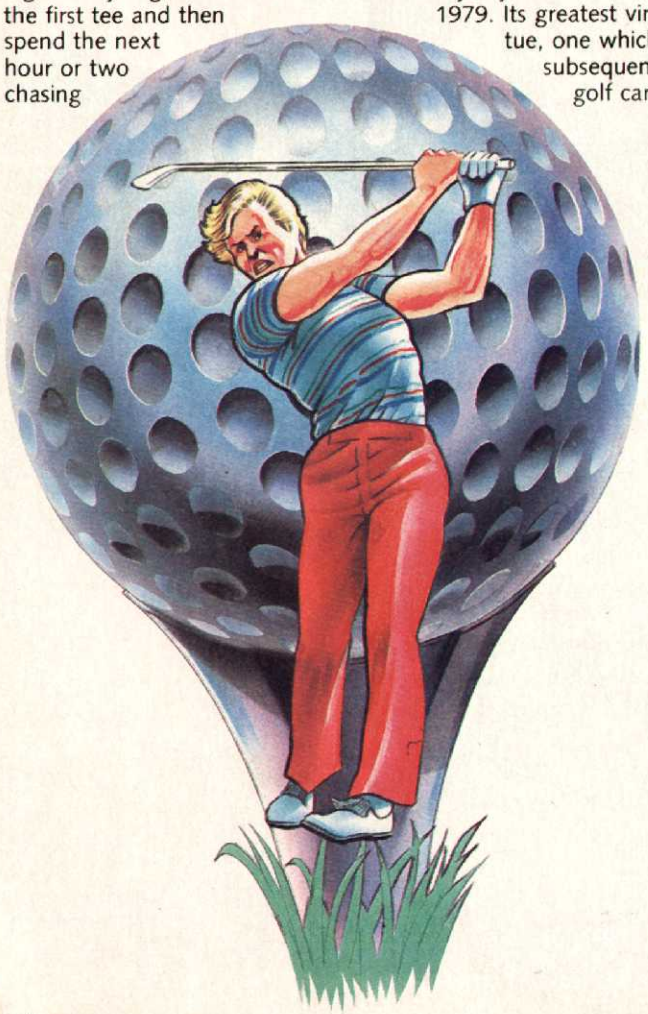
Water hazards, trees and rough will be the main barriers to breaking par (36) on this nine-hole course for one or two players. While it is possible to power a drive through the branches of the foliage that dots the course, more prudent golfers will probably want to play a more conservative game.

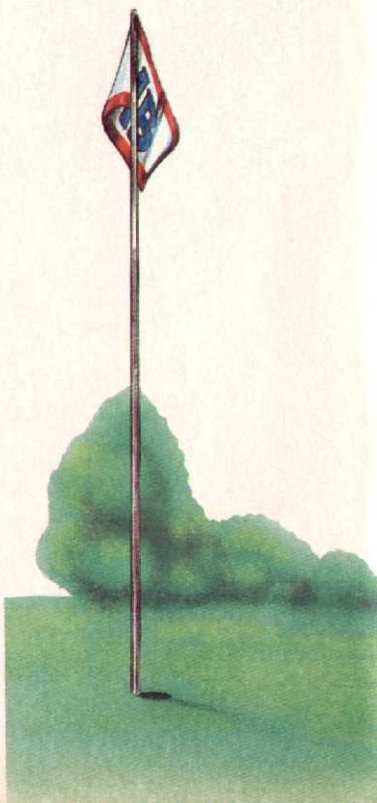
Sand traps are also an especially troublesome problem. The ball not only slows markedly, but it goes invisible. The only way to find it is to use the head of the club like a divining rod and, by moving your on-screen representative back and forth across the trap, estimate the ball's location by the direction in which the club head points.

Arcade archivists may be interested in **Miniature Golf,** a cartridge which Atari has withdrawn from its library. It wasn't terribly realistic—the ball had a tendency to bounce around in a manner more reminiscent of billiards than miniature golf—but it made for a challenging, fast-action game.

Mattel's PGA Golf

By far the most complex of all golf videogames, **PGA**





Win The Video Davis Cup

Golf will appeal most strongly to keen students of the real-life sport. It is the only game in which the player is armed with a whole bag of clubs instead of just one.

Players make their selection from among a group of shafts that includes a driver, putter, wedge, two woods and five irons. Each has distinctive characteristics that make it necessary to always pick the right one; aiming properly is not enough. *PGA Golf* also makes excellent use of the Intellivision controller by allowing the gamer to hit long, medium or short shots depending on which action button is used to initiate the swing. It's even possible to fine-tune a shot by adding a little slice or hook.

PGA GOLF

Serve's Up!

"Electronic Tennis" used to be a euphemism for ball-and-paddle contests closely modeled on the original **Pong.** Although there's absolutely nothing wrong with such games, manufacturers were only too aware that the public had become jaded by endless variations on the *Pong* theme by the time programmable systems came to the forefront in 1978- 1979. So it has only been in the last year or so that true tennis simulations have appeared from several publishers.

ACTV's Fresh Perspective

Activision produced the first tennis cartridge that offered gamers a new slant on the sport. This one- or two-player contest utilizes a trapezoidal court with the contestants located near the top and bottom of the screen. The ball also casts a shadow as it flies back and forth over the net, adding to the illusion of depth.

Tennis, like many of the other designs which Activision has produced, features ultra-streamlined play-mechanics. If an on-screen racqueteer is maneuvered close enough to the ball with the joystick, the computer will return the volley. The direction in which the ball travels depends on which part of the racquet it strikes. The difficulty switches widen or narrow the possible angles at which shots are returned, making it convenient to handicap a strong player matched against a relatively weak one.

Mattel's Tennis

The differences between Activision's and Mattel's net-sport cartridges reflect the varying approaches to electronic gaming which the VCS and Intellivision systems take. The VCS compatible game focuses on basic volleying action, while Mattel's **Tennis** stresses shot selection and other fine points of the sport.

A pair of gamers compete in regulation three-set matches, urged to great performances by the roaring cheers of the spectators.

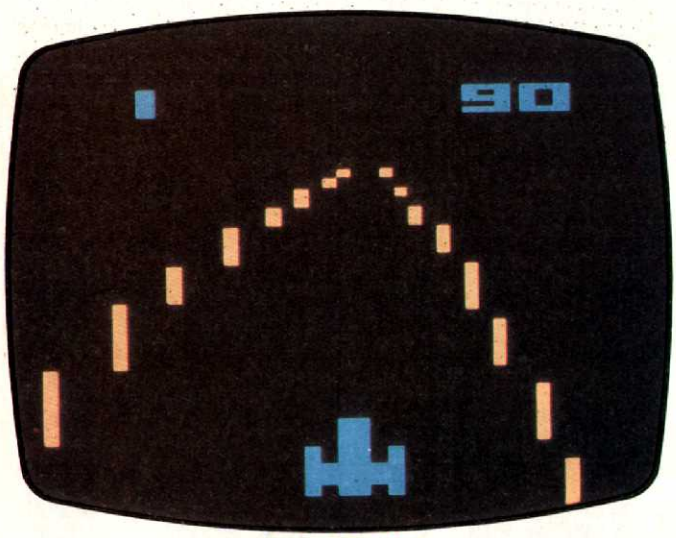
Pong-Style Tennis Lives!

No one will ever claim that *Pong* games are a realistic approach to the sport of tennis, but they often provide excellent competition and offer a complete change from the complexities of newer titles. Both Atari and Astrovision have games of this breed on cartridges that also include a selection of other contests.

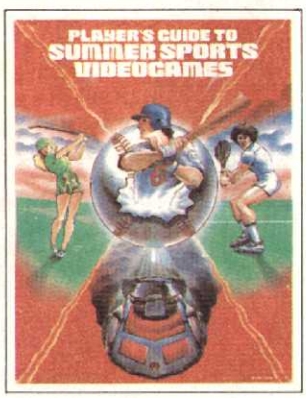
Video Olympics (Atari) features just about every *Pong*-style tennis game ever imagined. The graphics, in keeping with the original, are ultra-simple, and play is exactly the seesaw struggle that first captivated the pioneer arcaders a decade ago.

Astro's version, found on the same cartridge that also includes **Tornado Baseball** and **Hockey,** does considerably more with the graphics than most *Pong* games. Each arcader manipulates an on-screen tennis player. using the athlete's body as one big paddle with which to deflect shots back over the vertical net at your opponent.

Motor Sports Test



NIGHT DRIVER



The Smell of the Grease Pit, the Roar of the Crowd

In view of America's long-standing romance with the automobile—a love affair even stratospheric oil prices couldn't end—it's not surprising that driving and racing titles are so numerous in the videogame field. It seems like even those who curse traffic jams and bridge tolls in real life enjoy proving their driving skills in front of a video monitor.

This category of games includes several distinct types. There are racing games, in which cars speed around a track; steering games that require the arcader to dodge obstacles, and driving contests which put the participant directly behind the wheel.

Mattel's USAC Auto Racing

Although **USAC Auto Racing** is suitable for solo and head-to-head play, there's no question that it works best when a single driver races around one of the five available tracks in competition against the clock. Competition versus a human opponent is less satisfactory, because the computer constantly interrupts the action to reset the positions of both vehicles if one theatens to build a big enough lead.

Would-be Mario Andretti's can choose from among four different cars, each with a particular set of acceleration and cornering characteristics. (To make even-up competition easier, the roster of autos includes two, the tan and blue cars, which run precisely the same.)

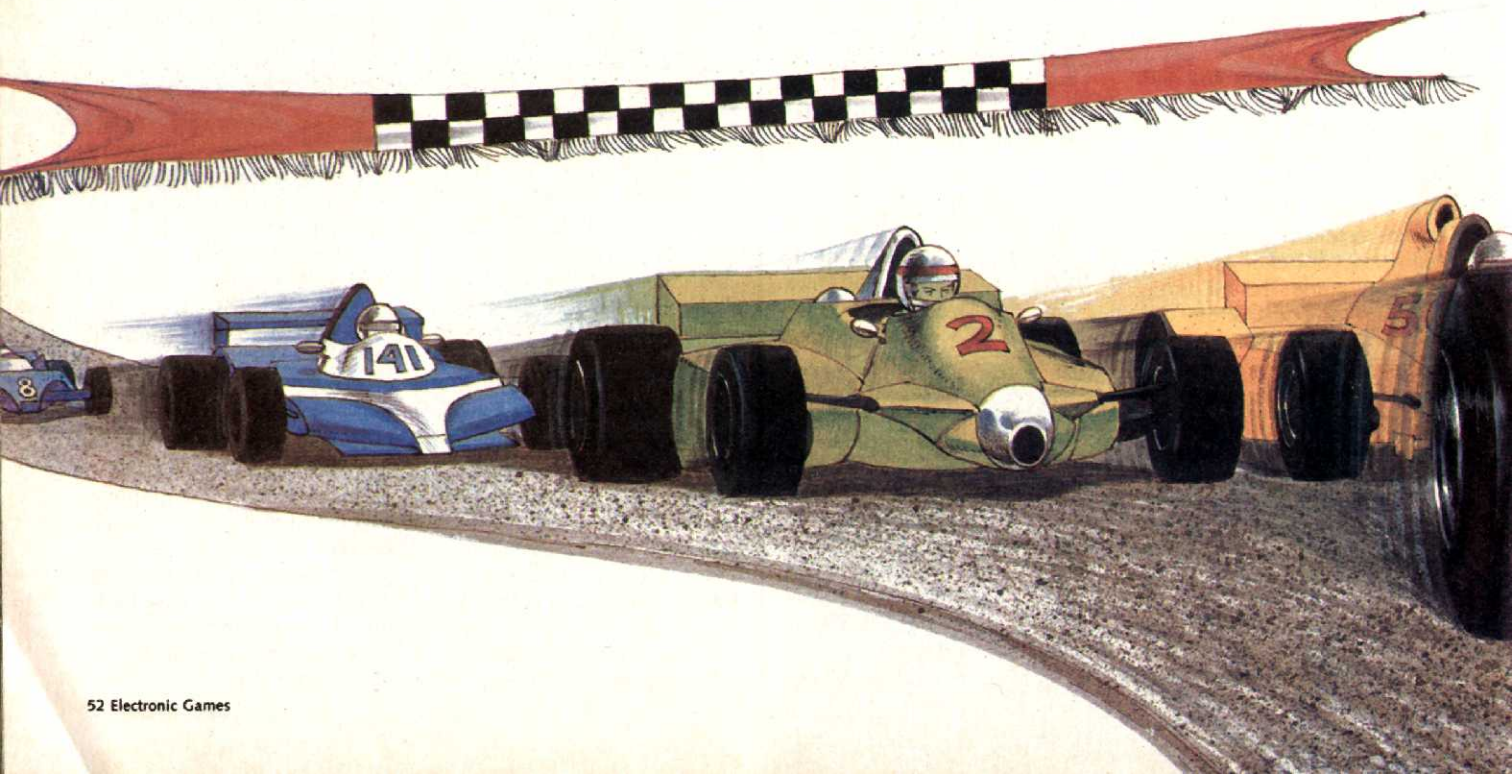
Superbly detailed graphics do much to lift *USAC Auto Racing* above the "first generation" racing cartridges. Coupled with an impressive array of authentic engine and brake sounds, this game gives participants a taste of the atmosphere that surrounds motor sports events.

This is much more than a simple steering game. Going around the course with the gas pedal slammed to the floor will result in a jarring succession of crashes. Good control of the wheel is vital, but only when united with a sensitive touch with the gas and brake pedals.

Atari's Indy 500

Loosely based on a multiplayer coin-op game of several years ago, this premium-priced cartridge is pure action from start to finish. Each participant—one or two can compete—uses special driving controllers provided with the game to steer racers around an oval track.

As with most Atari titles, this



Electronic Drivers

one offers numerous variations. The most exciting is **Ice Race,** which substitutes a super-slick surface for the usual roadbed, forcing drivers to use their skills to the utmost to keep from sailing off the screen at every turn.

Odyssey² Spins Out

This is the best of the arcade-style racing games and, as a bonus, it comes on the same cartridge as **Speedway** (a steering game) and **Crypto-Logic.** Instead of an exact oval, *Spin-Out* utilizes a course that requires the driver to make sets of rapid-fire turns. In fact, there is a choice of two courses, one of which includes a set of barriers that will challenge anyone's ability to keep those wheels rolling.

Speedway is the typical steering contest. An arcader steers his auto along a straight stretch of road, weaving in and out of the vehicular traffic roaring along in both directions.

Speedway has two different modes. There is a slow game useful for practicing or as a contest for very young players and a full-speed version for arcade aces.

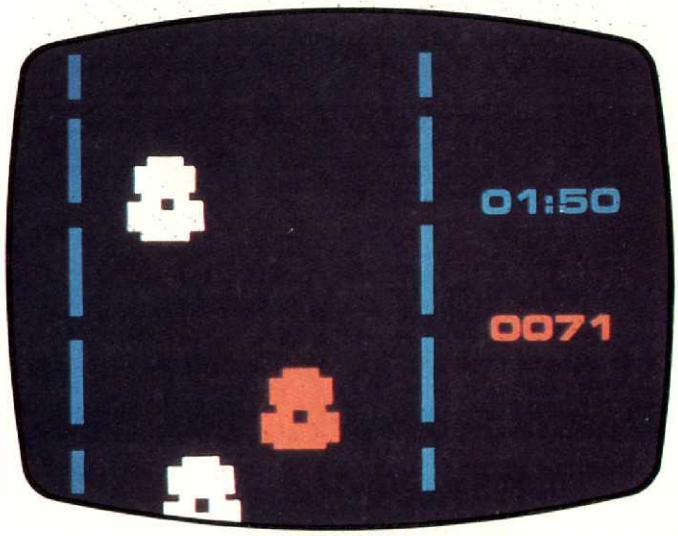
Burnin' Down the Measured Mile

Activision's **Dragster** is one of the most challenging motor sports games ever produced. One or two drivers can choose between either non-steerable or steerable cars, which they control using the joysticks. The racers begin in neutral and can be clutched and shifted to higher gears by pushing the stick to the left and letting it spring back to the center position.

The on-screen tachometer shows how fast the engine is revving and must be watched constantly. Red-lining the tach gets the most speed, but it also puts drivers in danger of blowing their auto's engine.

Drive the Grand Prix

Grand Prix, Activision's entry into the automotive derby, combines aspects of both racing and steering games. One driver navigates the course—there are four—seen in overhead perspective while also trying to avoid banging into the computer-controlled cars roaring down the same track.



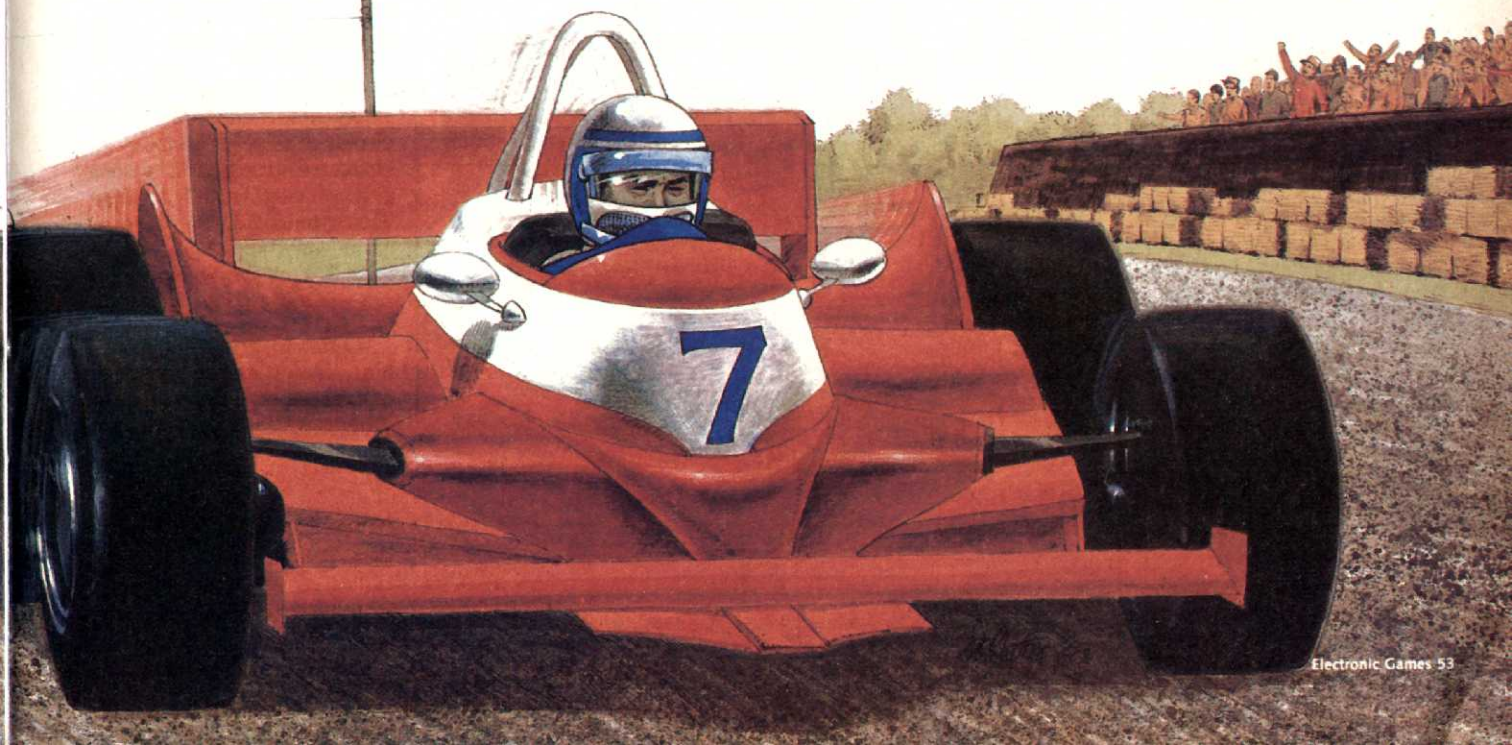
SPEEDWAY

Drive, They Said

Night Driver (Atari) and **280 Zzzap** (Astrovision) are true driving games in which the television screen becomes the front windshield. Motorists put the pedal to the floor and attempt to follow the twists and turns of the roadway while avoiding collision with on-coming cars.

Both of these cartridges are excellent graphically, with *Night Driver,* in particular, making the most out of low-res visuals.

Coming soon from Coleco will be **Turbo,** a home version of the Sega/Gremlin game now burning up the track in the arcades.



TEAM SPORTS STRESS MENTAL MUSCLES

The World's Most Popular Sport

Baseball and football are the most popular spectator sports in the United States, but it's soccer that makes folks go just wild with excitement throughout most of the rest of the world.

Leaving aside *Pong*-style soccer (such as on Atari's *Video Olympics* cartridge), the software suppliers haven't exactly rushed to provide home arcaders with video versions of the sport. Not only was it hard to simulate due to the continuous on-the-field action that characterizes real-life soccer, but there was some question as to whether American gamers would really be interested enough to buy such cartridges in big enough numbers to justify publication.

But soccer is gaining strength every year. The North American Soccer League, the American Soccer League and the indoor loop are exposing an ever-widening audience to major league caliber kick-ball, while sports programs in high schools and colleges are giving more and more kids firsthand experience of this exciting pastime.

The soccer video game drought ended abruptly in 1981. Mattel issued *NASL Soccer*, while Atari countered with *Pele's Soccer*. Even Odyssey got into the act to a certain extent, offering Odyssey fans a video edition of a popular soccer game under the title **Table Soccer.**

Major League Soccer Goes Electronic

One of the most innovative videogame cartridges devoted to any sport is Mattel's **NASL Soccer.** Although each coach has only three booters visible at any one time, the scrolling playfield provides a fairly convincing illusion of having men running up and down the length of the field. It is possible to kick-pass the ball off the screen and then, when the view of the field (seen in three—quarter perspective) shifts to follow its path, catch the pass with one of the athletes that scrolls into view.

Like most of the company's sports sim ulations, Mattel's *NASL Soccer* is loaded with the little touches that do so much to evoke the "feel" of the real thing. Such niceties as corner kicks, free kicks and goal kicks are included, and authentic noises practically put gamers in the stands.

NASL SOCCER

Pele's Soccer By Atari

This cartridge proves there's still plenty of life in the VCS. Atari's design staff quite correctly realized that the system did not have the memory capacity or graphic resolution needed for an authentic simulation, so instead it took a more arcade-oriented approach to creating a videogame with a soccer theme.

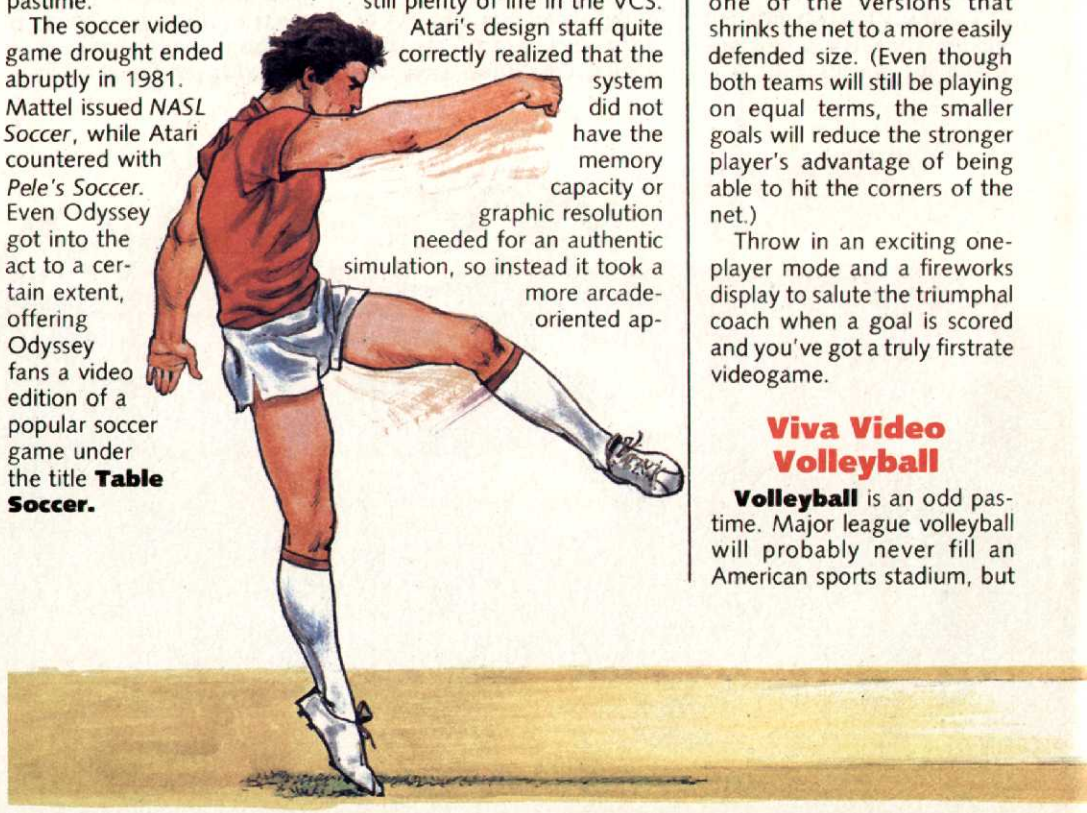
Pele's Soccer may not *look* much like the real sport, but this cartridge definitely captures the spirit of the game. Each coach uses the joystick to direct a trio of on-screen booters arranged in a triangle. Passing and shooting are accomplished by pressing the action button and orienting the stick in the desired direction. Teams race up and down the vertically scrolling playfield, setting up complex patterns to break into the open for a tough-to-handle oblique shot at the goal.

The imposing roster of 54 game variations comes in particularly handy when arcaders of unequal ability want to go head-to-head. It is possible to minimize the deficiencies of a poorer gamer by simply using one of the versions that shrinks the net to a more easily defended size. (Even though both teams will still be playing on equal terms, the smaller goals will reduce the stronger player's advantage of being able to hit the corners of the net.)

Throw in an exciting one-player mode and a fireworks display to salute the triumphal coach when a goal is scored and you've got a truly firstrate videogame.

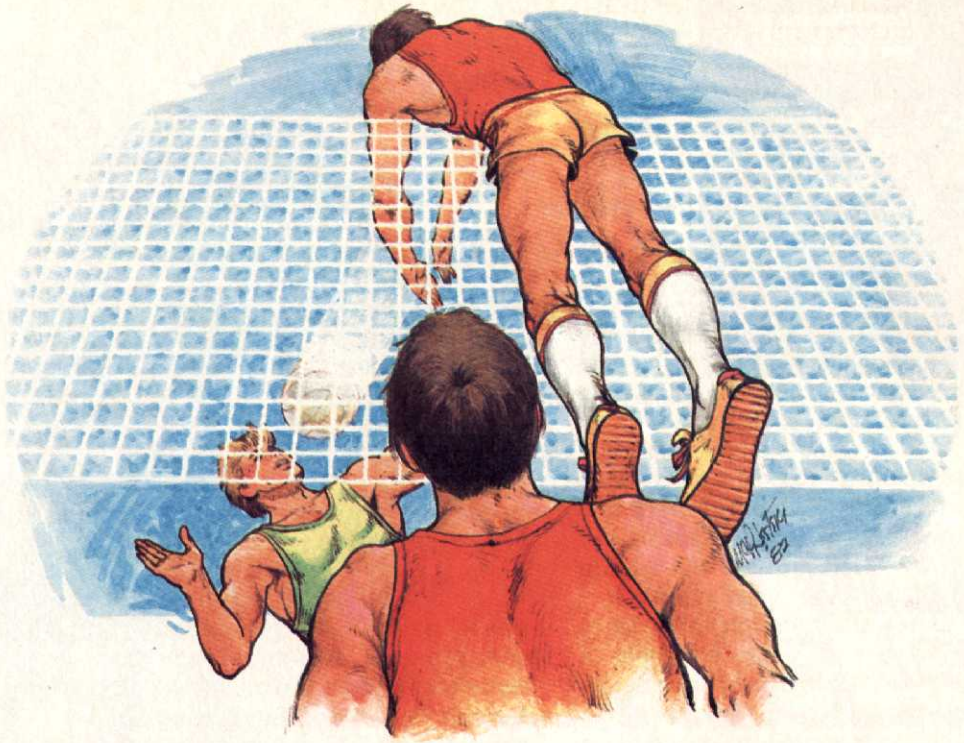
Viva Video Volleyball

Volleyball is an odd pastime. Major league volleyball will probably never fill an American sports stadium, but



just about everyone has spent at least an hour or two romping around the court.

Memories of lazy Sunday afternoon volleyball games aside, the sport boasts a riveting seesaw action. Even better from the point of view of videogame designers, the sport has turned out to be relatively easy to turn into an electronic contest.



Atari's Volleyball

Almost buried in Atari's bountiful *Video Olympics* cartridges is one of the cleverest variations on the traditional *Pong* theme—**Volleyball.** Two players vie to see who can rocket the ball over the mid-screen net in such a way that the rival gamer cannot return it successfully.

Spiking, accomplished by hitting the action button on the paddle controller, is an exciting tactical option. Back the other player against the court's backline and then smash a spike into the ground just on his side of the net.

The same cartridge also includes *Volleyball 4*. This is similar to the version just described, but it adds the fun of competition between two-player teams. Each gamer controls one on-screen athlete, which opens the way for some tricky passing maneuvers to set up the perfect return shot.

Odyssey's Volleyball

This is the closest approach to the real sport to be found in the videogame world. Although the influence of *Pong* is quite obvious, *Volleyball!* escapes the too-predictable patterns that frequently arise when there is only one on-screen bat for each player to use when hitting the ball back and forth. By putting six on each team, Odyssey's designers have made it possible for each team, Odyssey's designers have made it possible for a decisive role in this one- or two-player contest.

Simple but crisp rendering of the on-screen characters and a good assortment of synch sounds increases the entertainment value of this solid title.

Winning at Video Volleyball

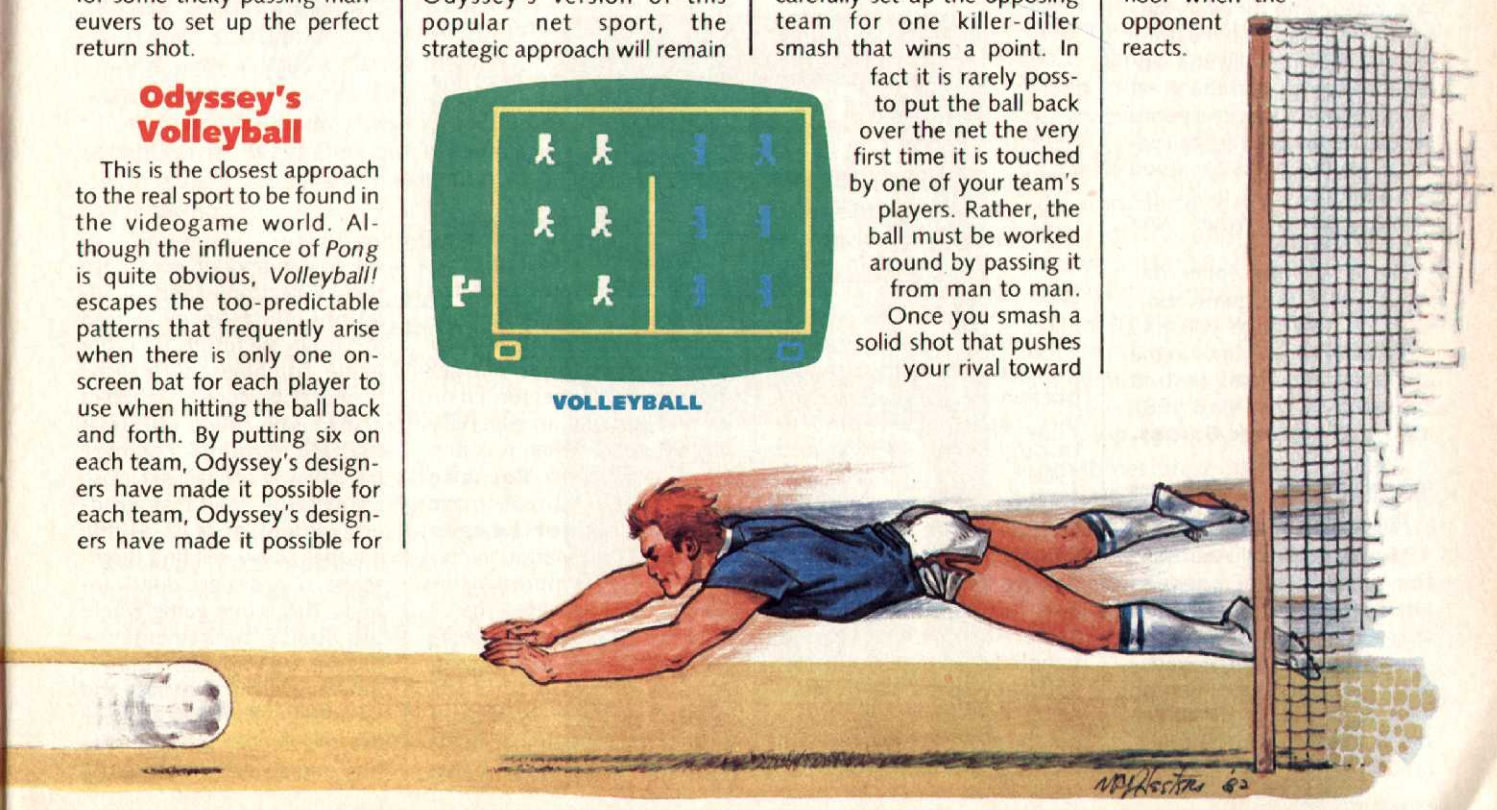
Whether you play Atari's or Odyssey's version of this popular net sport, the strategic approach will remain pretty much the same.

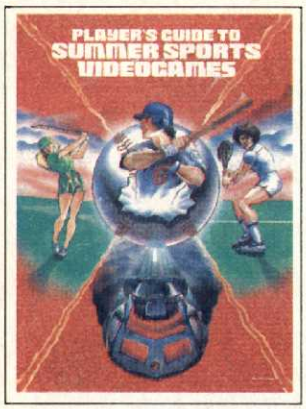
The first thing to understand is that Volleyball is hardly the perfect contest for those electronic coaches who have a tough time keeping their cool. The back-and-forth action across the net can be very swift at times, but the dynamics of play are a good deal more subtle.

The idea in video volleyball, as in the real-life sport, is to carefully set up the opposing team for one killer-diller smash that wins a point. In fact it is rarely possible to put the ball back over the net the very first time it is touched by one of your team's players. Rather, the ball must be worked around by passing it from man to man. Once you smash a solid shot that pushes your rival toward his backline, you can spike the return volley and have an excellent opportunity to score.

In Atari's Volleyball, it is important to both acquire some expertise with the spiking option and to learn how to integrate it into overall strategy. Constantly spiking makes the maneuver too predictable. It should come as something of a surprise, so that the ball is already streaking for the court floor when the opponent reacts.

VOLLEYBALL





JOIN THE ELECTRONIC BOYS OF SUMMER

Hit 'em Where They Ain't

It's no accident that baseball has inspired at least one videogame for every system. The National Pastime translates beautifully into videogame terms, and the great number of strategic options serves as an interesting balance to the need for good coordination and quick reflexes, especially when your team is on defense.

Those wishing fuller descriptions of the games outlined on this page will find more extensive reviews in the article "Grand Slam!", which appeared in the May 1982 issue of **Electronic Games.**

Standard System Baseball Games

Home Run by Atari puts the timeless duel between pitcher and hitter at center stage. Although even the most complex of the variations only puts three men on each team, the cartridge can still be enjoyed within its limitations.

Perhaps it would be better to think of *Home Run* as "video stickball", because the routine of play is quite reminiscent of that popular schoolyard sport. A nimble fingered arcader can use the joystick controller to make the ball do everything but loop-de-loop on its way to the plate.

Odyssey's **Baseball!** definitely rates as one of the stellar attractions in the company's library of software. In many ways, it resembles an electronic version of the electromechanical coin-op baseball games that were the chief attraction in amusement centers, apart from pinball, through the 1950's and 1960's.

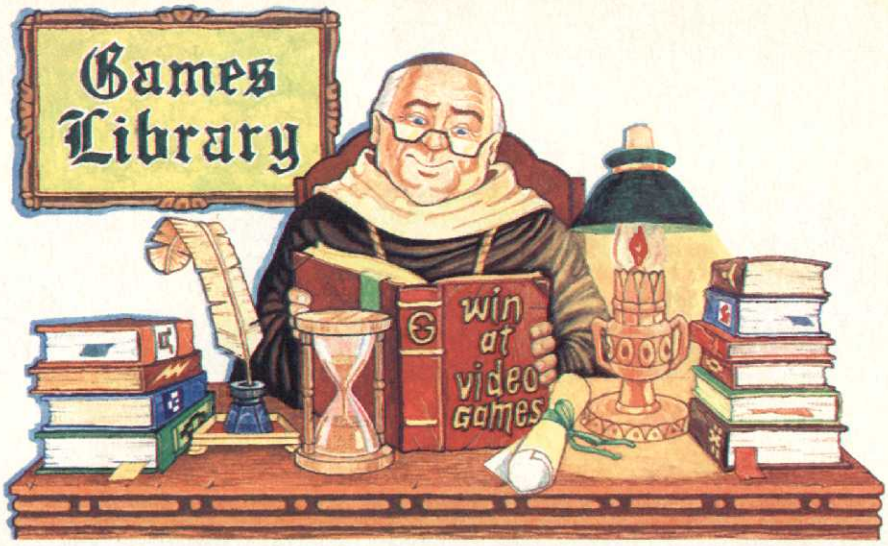
Like those machines, *Baseball!* is not as concerned with the minute details of fielding as much as pitching and hitting phases of the game. After the hurler has attempted to dazzle the batter with an inside or outside curve, the screen simply prints out the result of any successful hit instead of leaving how far to stretch it to the discretion of the offensive team's manager.

There is, however, some fielding. The outfielders can be positioned to anticipate the batter's tendencies. Running can also be a factor, since managers do have the opportunity to send the lead runner to the next base on a safe hit to the outfield.

Senior System Baseball Games

The advantages that the senior programmable videogame systems have over the standard ones—larger memory and higher resolution graphics—make an especially big difference when it comes to video hardball. **Tornado Baseball** by Astrovision and especially, **Major League Baseball** by Mattel, simply offer more comprehensive simulations of baseball than it would be possible to create with either the Odyssey or Atari.

Major League Baseball, a cartridge now enshrined in the Videogame Hall of Fame, has set a standard of excellence that all electronic sports simulations must be measured against in the future. No other game combines its realistic play-action, superb graphics and rousing sound effects. If Mattel's diamond cartridge has a flaw, it's that it is so close to the actual sport that arcaders without at least a little baseball savvy will find themselves at a distinct disadvantage. This is one game where the sport's fundamentals—hitting behind the runner, throwing to the right base and so forth—will frequently spell the difference between victory and defeat. G



By Charlene Komar

How to Win at Video Games

By Ray Giguette/Martin Press/$2.50

Here come the quickie rip-offs. The immense popularity of electronic games has writers and their publishers burning the midnight oil to rush guides and handbooks to the book racks as quickly as possible to take advantage of all the excitement. Sometimes, something gets left behind in all the rush: quality. This is definitely one of those times.

"How to Win at Video Games", a 48-page booklet, consists of an introduction and coverage of 10 popular arcade games: *Asteroids, Pac-Man, Berzerk, Battlezone, Missile Command, Armor Attack, Space Invaders, Astro Invader, Phoenix* and *Galaxian*. Each review is broken down into a description of the game, an interview with a high scorer and a selection of playing tips.

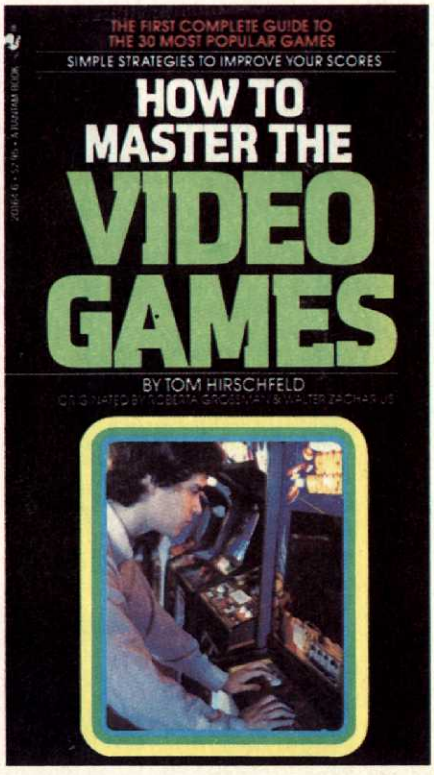
Of course, quality sometimes excuses insufficient quantity. Not here. First of all, most of Giguette's selections are already well past their peaks of popularity. And the reviews themselves are simplistic at best. The descriptions are less than complete and seldom tell anything new.

The interviews with so-called "high scorers" are ludicrous. Perhaps the author was trying to catch the flavor of the way each authority talks. This might work, but only if the interviewees received a lot of guidance, or if Giguette had provided his own analysis. But when all the reader has is someone's off-the-cuff comments about a game, it just doesn't get the job done.

The choice of "high scorers" is also a little hard to believe. How can someone who admits that she "hardly ever" destroys three waves of aliens be called an expert at *Space Invaders*?

The playing tips are mostly culled from the interviews, and they're worth about as much. Telling players to keep moving when they're under attack will never be confused with brilliant strategy. Players already know they don't want to get hit; a book such as this is supposed to tell them *how*.

Even the introduction is awful. It's pretentious, filled with worthless generalities and, in places, unintentionally funny.


THE FIRST COMPLETE GUIDE TO THE 30 MOST POPULAR GAMES
SIMPLE STRATEGIES TO IMPROVE YOUR SCORES
HOW TO MASTER THE VIDEO GAMES
BY TOM HIRSCHFELD

It is, in fact, hard to find anything nice to say about a production such as this. Save your money. You'll learn more by changing the $2.50 into quarters and playing the games.

How to Master the Video Games

By Tom Hirschfield/Bantam Books/$2.95

Each section of this strategy guide to popular coin-op machines begins with a detailed description of the game's physical layout. The author takes considerable pains to cover the control system, scoring point values and even a rundown on the dangers the arcader is likely to face once the quarter hits the coin slot.

What's missing, unfortunately, is a capsule description of the game, such as might be useful for a beginner. It would provide an overall "feel" for the game, as well as giving participants such necessary information as how many ships, cannons or whatever the player gets at the start of the action.

The chapters devoted to individual coin-ops are sandwiched between sections devoted to general suggestions. The beginners' guide that kicks off the book explains the basics, but it seems unlikely that it would help a true neophyte; some arcade experience is required just to understand the author's comments.

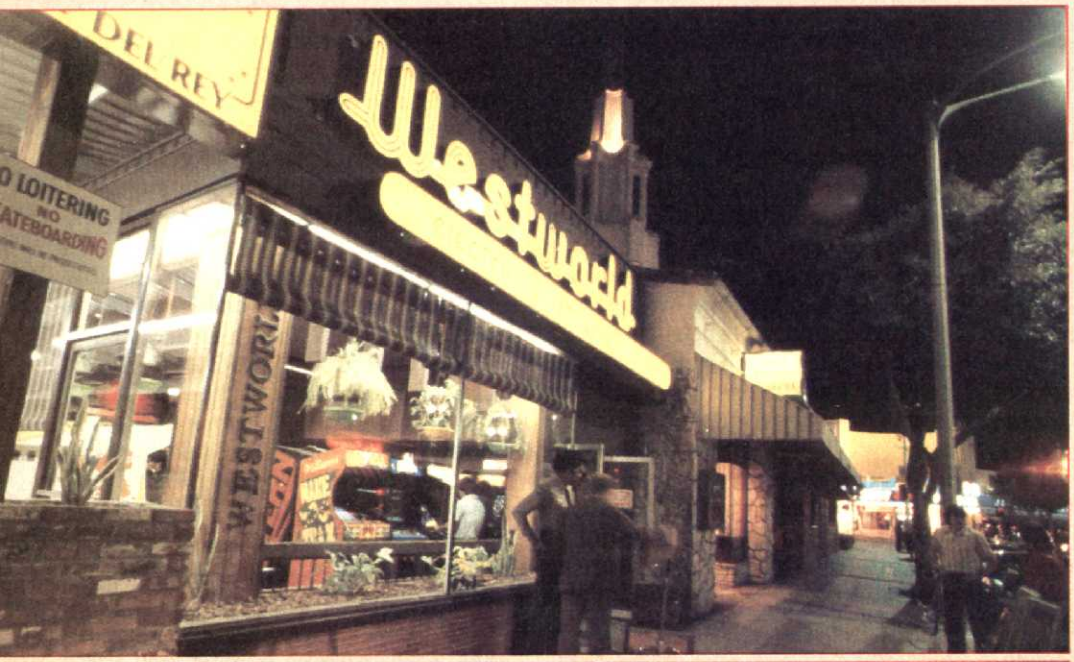
The chapter on "TV games" reads like a throwaway. It does little more than inform readers that such devices exist, hardly news to most arcaders. Much more successful is a chapter on off-machine exercises. It's a clever idea that may well lead to overall improvement for players who follow the common-sense ideas it contains. The listing of the addresses of the best-known manufacturers of coin-operated videogames will be welcomed by players who have wondered where they could go to make a suggestion or register a complaint.

The writing is the weakest point of the book. It's very dry, and the author sometimes presents his best ideas in a confusing way. As Hirschfield himself points out, videogames should be fun. Yet the textbook-like style of "How to Master the Video Games" often makes them sound more like work than play.

Still, this is certainly one of the best primers on the coin-op scene yet produced. It may not make for stimulating reading, but it does offer a lot of helpful hints in a handy package.

continued on page 61

ARCADE


DEL REY
NO LOITERING
NO SKATEBOARDING
Westworld
WESTWORLD

PAC-MAN

FROGGER

KICK

AMERICA

Welcome to Westworld!

By David Lustig

Question: when is an arcade not an arcade?

Answer: when it's an electronic amusement center. Of course, a rose by any other name is still a rose is a rose is a rose, to muddle the words of two poets, but arcade operators are still correctly sensitive about the image their industry has been saddled with. As arcades attract greater and greater visibility, they draw the increasing attention of those who equate "pinball parlors" with images of unsavory youth smoking cigarets and generally concentrating on being up to no good whatsoever.

Pinball machines, the ancestors of today's **Donkey Kong** uprights, were illegal in many states—including New York—until quite recently. So if some of today's arcade operators seem to be scrubbing their images a little overzealously, well, they can hardly be blamed. They want people to see that their amusement centers are entirely wholesome fun places where parents can leave their children for short periods of time without any concern whatsoever.

An example of this new breed of arcade—er, electronic amusement center—is operator Dick Sogn of Westworld, located in beautiful Westwood Village, California. A family run business, Westworld caters to players of all ages. While the crowd here includes many college-age students—UCLA is only a few blocks away—the players comprise a healthy mix of all ages and life-styles.

There are no foosball tables, pinball machines or pool tables at Westworld, but not because Sogn considers them old-fashioned. Rather, Sogn outlaws any two-player contests that could lead to super-competitive behavior or rowdyism.

Whatever the reason, Westworld has an extremely modern look. There are very few older videogames and the few that linger are relegated to the back, almost out of view. Sogn has the soul of a true contemporary gamer. When asked which games he prefers, he answers with a grin: "The latest one in!" He personally playtests each new game and, if he likes it, puts in his order in multiples of 4, 8 or 12.

Kids under 16 are banned during school hours and unaccompanied minors must leave by 9:30 P.M. No beer, drinks, drugs or food are allowed on the premises, with low-key, but uniformed guards visible to enforce Westworld's laws.

Because of its proximity to Hollywood, Westworld has gotten lots of attention. It has been covered in *Fortune* magazine, been featured in several motion pictures (most recently, "Making Love") and visited by celebrities. Kate Jackson and Cheryl Ladd both dropped by and even Farrah herself got as far as the parking lot before the crush of people forced her to reluctantly head home.

The rich as well as the famous frequent Westworld, including several sheiks, one of whom sent in his six bodyguards first to inspect the place before daring to take on the **Pac-Man** gobbler.

Dick is helped out by the center's manager, Stuart Lewis, in maintaining the facility's 90 machines. It may not be an arcade, as Sogn firmly contends, but it'll do until one comes along.

GROW WITH US!

A special message for electronic games retailers

Playing electronic games is now America's fastest-growing hobby. Here are some facts:

★ More than 10 million quarters are dropped into current coin-op champ "Pac-Man" every single day.

★ Nearly 5 million programmable videogame systems are hooked up to U.S. TVs already. Four million more are expected to be sold this year alone, along with 30 million game cartridges to play on them.

★ Sales of computer games are expected to exceed 1 million units by the end of the year.

ELECTRONIC GAMES, the first—and only—magazine devoted to this booming field, is growing as fast as the high-tech hobby it covers. Our premier issue was a newsstand phenomenon, with many dealers reporting sell-outs. Our second issue promises more of the same.

So if you sell videogame systems, hand-held games, or computer games, you should also be selling ELECTRONIC GAMES Magazine. As an EG retailer, you'll earn a good profit on every copy you sell (of course, all unsold copies are fully returnable). You'll also be providing your customers with that special "extra" that will bring them back to your store again and again.

To get all the information you need to join the ELECTRONIC GAMES retailer program, fill out and mail the coupon below. There's no obligation, so do it today. ELECTRONIC GAMES Magazine is growing fast . . . and we cordially invite you to grow with us.

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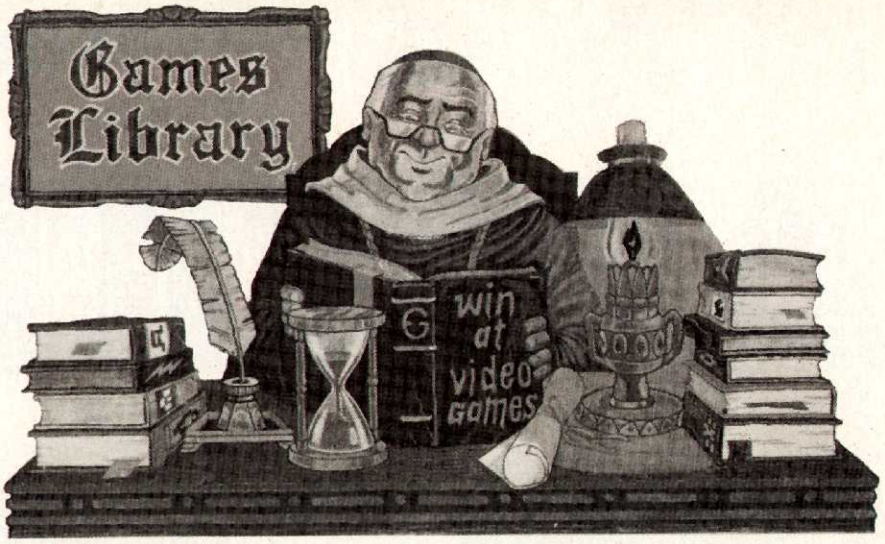

Continued from page 57

Mastering Pac-Man

By Ken Uston/Signet/$1.95

This is one of the better books on playing electronic games now available. The 128-page guide is complete, easy and interesting to read, and practical. The tips *work.*

The book is suitable for a variety of **Pac-Man** players. The true novice who merely wants to play a respectable game won't be overwhelmed by instructions only veterans understand. Yet more experienced players who are willing to devote a moderate amount of time to achieve an impressive, if not truly great, score can find the way to do so in these pages. And the utter fanatic who'll study and practice for 20 hours or more to become, in Uston's phrase, a Pac-Master (consistently scoring 150,000 or higher) will make this his bible.

The well-organized book begins with an introduction that outlines the volume and proceeds to a simple and thorough explanation of *Pac-Man,* including some points even an experienced player may have overlooked. The physical layout of the board and the differences in succeeding boards are covered before Uston presents a break-down of what chapters are applicable to which players.

The bulk of the book is devoted to explanations of the patterns Uston has developed to produce higher scores. Plenty of clear diagrams help readers follow the text. Each chapter tells on which boards the pattern presented works for both the slow and fast versions of *Pac-Man.* Uston also reminds the reader which kind of player should learn the pattern.

Besides thorough coverage of the arcade versions of *Pac-Man,* the book deals with some of the similar coin-op machines which have appeared, principally **New Puc-Man** and **Maze-man.** It also discusses portable versions, pointing out similarities and differences from the arcade original and making playing suggestions.

Unfortunately, *Pac-Man* and *Pac-Man*-like games that have appeared in cartridge form for home videogame systems post-date this book, so they're not included. Devotees of these cartridges can pick up some tips from the last chapters in the book.

This is where Uston offers improvisational techniques and general tips and how to deal with program changes. Besides being valuable in their own right, these strategies can also be adapted for home games.

The book is very detailed, but never boring. Uston's writing style is clear and light, and it gets to the point in an uncomplicated way. Anyone interested in *Pac-Man* on any level should find mastering *Pac-Man* a real bargain.

The Complete Guide to Electronic Games

By Howard Blumenthal/N.A.L./$6.95

To begin with, this really isn't—a complete guide, that is. Even if Blumenthal reviewed every single game available when the book was being written, which is probably equally impossible and undesirable, by the time the book reached the public it would already be missing the games produced in that period of time. That's simply the nature of the electronic

game industry today.

But allowing for the somewhat misleading title, the book can be valuable. Probably a better title would be "A Buyer's Guide to Electronic Games", because that's really what it is.

The volume reviews some 170 games divided into six categories: sports; logic, strategy and memory; action; learning aids; multiple game systems and special purpose devices, and videogames. It also contains an introduction that gives an historical sketch of the field and a handy list of manufacturers' addresses.

After each review, the author includes a summary that lists the game's manufacturer, price, power requirements, a star-based rating and a capsule recommendation. The author might have included a suggested age range; that appears sometimes, but would be helpful for each game.

The reviews generally give a good idea of each game, and the large-size format allows for helpfully big pictures. Since Blumenthal wrote the book in 1980—it came out last year—it is, inevitably, dated. Most of the top hand-held games are included, however. Those that combine an electronic element with a board game suffer most, since such strides have been made in the last year or so in that field.

The weakest section, though, is the one on videogames, here the problem isn't just timeliness. The system used is inconsistent, so some brands get more attention than others. And Blumenthal's judgement seems to falter. He highly recommends lesser systems like APF's M1000 while ironically criticizing Odyssey² for poor distribution! Anyone who awards Atari's **Superman** cartridge only one star out of a possible five leaves his standards open to question, to say the least.

If you're a steady buyer of a range of electronic games, or plan to buy a number in the near future for, say, birthdays or holiday gift-giving, the volume makes a good guide. Some shopping around to cover new additions to the field should be used to supplement Blumenthal's advice. And the true electronic game buff will find it valuable as a compendium of the field circa 1980.

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PASSPORT TO ADVENTURE

Are You a Free Being— or Just a Number?

By Arnie Katz

The Prisoner/Interactive Fantasies/Apple II/48K disk

Gamers are often understandably skeptical on the subject of simulations in which the computer is supposed to provide the opposition. Designers do their best to create a tough robot adversary within the limits imposed by memory capacity, but automatic baseball managers and digital Nazi generals just don't perform with the same distinction as a good human foe.

This problem rarely occurs in the area of electronic adventures, however, because the computer's usual role is that of referee, not combatant. That is, the program simply responds to the player's inputs, keeping track of developments as necessary.

The computer is no innocent bystander in Edu-Ware's **Prisoner.** It represents the unseen masters of The Island, a secluded compound that houses people who are either being kept isolated from society or from whom some piece of information is desired. The player is a secret agent whose retirement has sparked questions in certain quarters. The prisoner has been kidnapped enroute to a vacation and sent to The Island. Under the leadership of the mysterious caretaker, the jailors will attempt to get their captive to enter the special resignation code that is the numerical indication of your reason for quitting the cloak and dagger business.

A tribute to David Mullich's expertise is that the computer puts up more than enough fight to satisfy the most experienced adventurer. Play this game when you're at anything less than your mental and physical peak, and a rugged time is guaranteed. Like the shadowy oppressors in the Patrick McGoohan television series that inspired this disk, your once-friendly Apple II will demonstrate incredible resourcefulness in its attempts to coerce you into revealing the three-digit number that explains your reasons for resigning. The first couple of test games played as background for this review ended with a haggard gamer entering the resignation code just to find a little peace.

Thankfully, designer Mullich has provided a fairly painless way to save a game in progress. Pushing "Control C" records the prisoner's current inventory of possessions, bankroll and point score for use when the game is restarted at some point in the future. This is not an adventure you'll want to play for 10 hours in a row; it's just too grueling.

Scoring plays a significant role in the game, but there's no on-screen tote board to constantly let you know how you're doing. The computer grades every single decision made by the prisoner in the course of play, basing the numerical score on how individualistic the captive's responses are. Since it's virtually impossible for the arcader to guess which specific actions will build the running point total, it is necessary to confront *The Prisoner* in purely game terms. This encourages the prisoner to really get into the spirit of the struggle between the jailers and their star inmate.

The score is closely linked to the prisoner's chances of escaping — the ultimate goal of the player. Many doors remain closed until the score reaches a certain level, so this is one adventure that even gifted players won't be able to race through in a couple of hours.

The computer only reveals the score to the player at three points in the game: when the prisoner escapes, the forces of the Island obtain the resignation code or the game is suspended. The truly desperate can obtain a clue at the time a game in progess is saved to the disk. Clues are produced randomly, though prisoners who have a higher score will get a crack at a better class of hint. The player can get as many clues as desired, but each one costs 10 points from the score. There's also nothing to prevent the Apple from

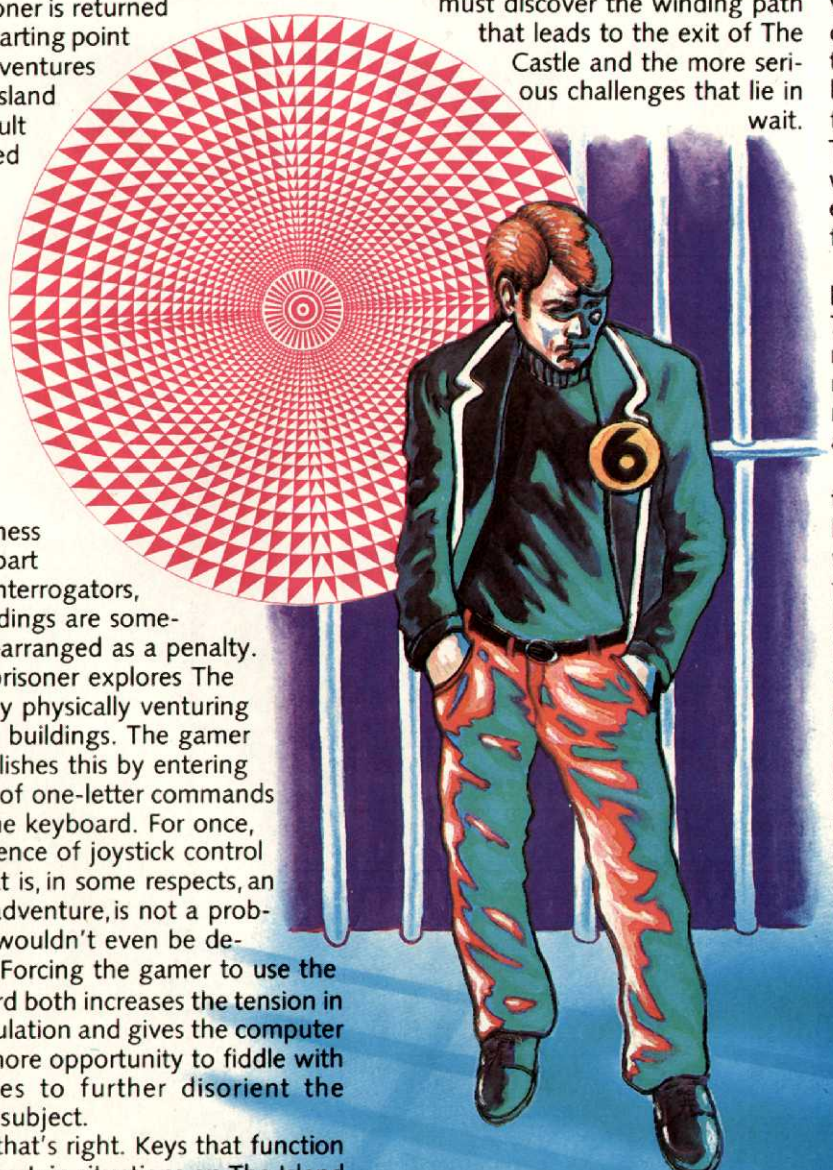
giving you the same clue more than once, and this is, in fact, fairly likely to happen if you haven't accumulated a good score. Needlessly to say, good clues are particularly few and far between.

The Island consists of 20 numbered structures, each containing a mini-adventure. Only four buildings are shown on screen at any one time, but the field scrolls in all four directions so that the prisoner can reach them all. An information center is located in the middle of the crossroads that separate each grouping of four buildings. When the prisoner is returned to the starting point of all adventures on The Island as a result of a failed escape or a little over-zealousness on the part of the interrogators, the buildings are sometimes rearranged as a penalty.

The prisoner explores The Island by physically venturing into the buildings. The gamer accomplishes this by entering a series of one-letter commands using the keyboard. For once, the absence of joystick control for what is, in some respects, an action adventure, is not a problem. It wouldn't even be desirable. Forcing the gamer to use the keyboard both increases the tension in the simulation and gives the computer much more opportunity to fiddle with the rules to further disorient the human subject.

Yes, that's right. Keys that function during certain situations on The Island may not work — or may work differently —at other points in the game. It's all part of the psychological onslaught that the prisoner must face at the hands of his captors.

It would defeat the idea of *The Prisoner* to provide prospective players with much advance warning about the various delights The Island offers to its unwilling guests. These mini-adventures must be experienced firsthand. The Castle — the starting point for the prisoner — is typical and, since it is described in the instruction manual —can be discussed here. It's a jail within a jail, an invisible maze that the prisoner must successfully negotiate just to get to the rest of the game. Using the U(up), D(down), L(left) and R(right) keys, the player must discover the winding path that leads to the exit of The Castle and the more serious challenges that lie in wait.



Although *The Prisoner* is fundamentally a mental game, the graphics are surprisingly good. There's usually something to look at in each building, though explosion fans will have to look elsewhere. This game is copyright 1980, and there's no question that its visuals are not on a par with the newest titles. Still, the graphic design is surprisingly advanced and is more than sufficient to hold the game together.

Those who find one-page instruction sheets annoying will be glad to see the 14-page, 8½ x 11 in. rules folder that accompanies *The Prisoner*. It isn't very professionally produced, but it does give as thorough an introduction to the game as is possible without handing the gamer the really important information on a silver platter. There's even a section of playing tips which is a "must read" for anyone who expects to seriously challenge the forces of The Island.

If any computer game program can be described as an overlooked classic, *The Prisoner* certainly fills the bill. Little noticed when it first reached the retail market more than a year ago, it is finally climbing up the popularity charts as it deserved to do from the very first.

What held it back? Best guess is that the uninspired packaging caused browsers to overlook the title before world-of-mouth began to turn the tide. Edu-Ware (parent company of Interactive Fantasies) sure knows how to make a good game, but the package design department is not nearly as talented. The stock cover used on many of the company's other software products simply doesn't give the slightest clue as to what lies inside. It would be nice if the supplier reworked the packaging into something more enticing. (Having the rulebook set in type wouldn't hurt, either.)

NEW PRODUCTS

Videogame Furniture/
Bush Industries

One of the major development areas in the world of video-related peripheral products has been the video/videogame furniture industry. As the number of videophiles and electronic gamers who own as many as five separate TV-connected entertainment machines (VCR's, videodisk players, computers, programmable videogames, ad infinitum) grows, it becomes more important to begin thinking of the family television as the center of a major home entertainment unit.

One of the major developers of this type of arcading peripheral is Bush Industries, which offers a wide variety of handsomely styled cabinets and units for housing anything from videogames to computers and VCR's.

Bush products are available nationally in audio, appliance, department and discount stores as well as catalog

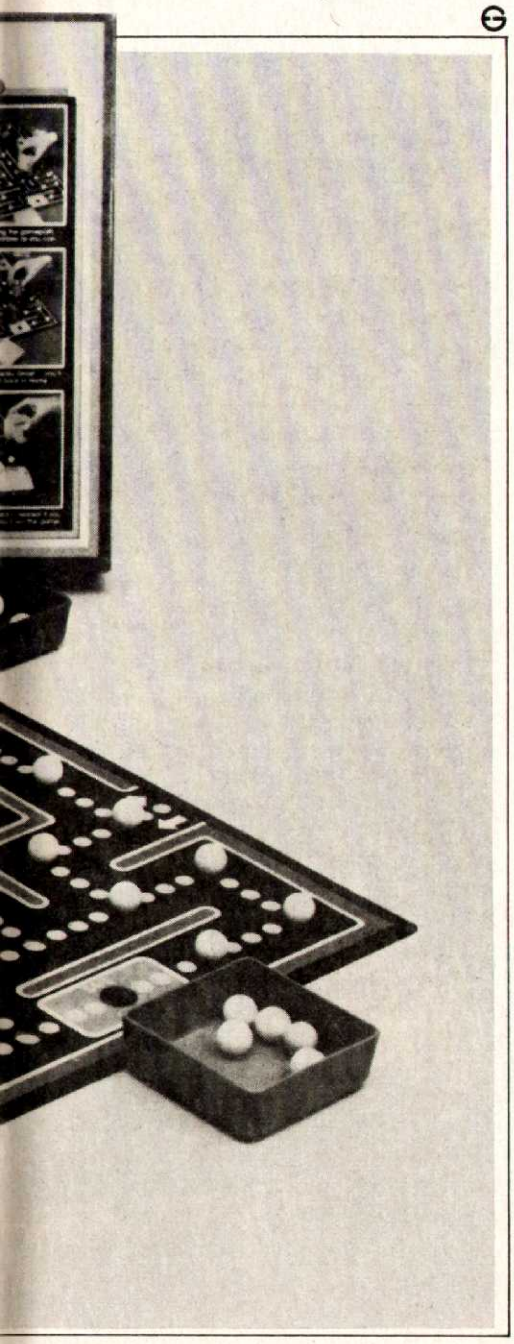
showrooms at a wide range of prices.

Pac-Man Board Game/Milton Bradley/Price unavailable

Imagine a board game that faithfully reproduces the action of a popular videogame for young gamers. That's exactly what Milton Bradley has done with their new **Pac-Man Game.**

The playboard is set up much like the coin-op's playfield maze, and players maneuver gobblers, ghosts and company through the labyrinth, picking up pills, landing on "safe" spots and generally gobbling to their heart's content.

The graphic elements are adorable, capturing the videogame's feel with remarkable skill. For gamers 7-14.



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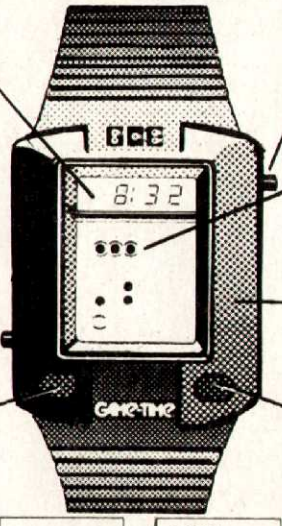

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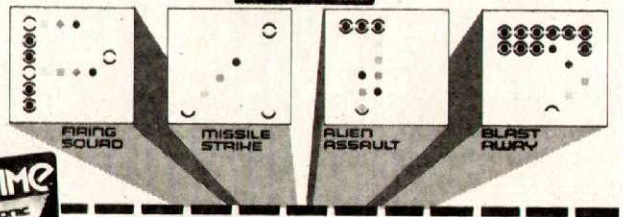

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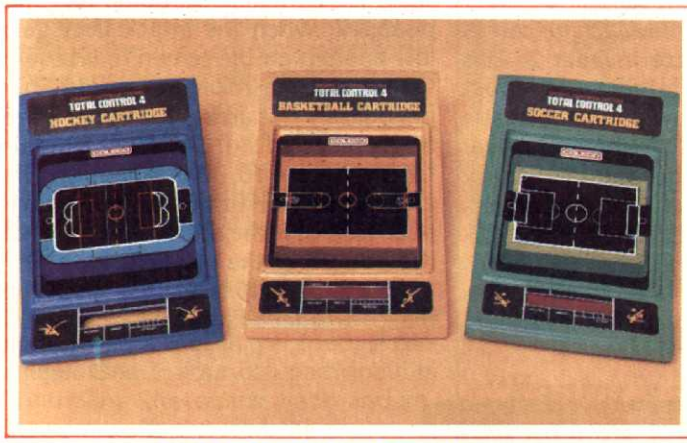
Mini-Arcade Gallery

By Joyce Worley



TOTAL CONTROL OVERLAYS

COLECO TOTAL CONTROL

Many arcaders consider stand-alones the step-children of the electronic game field. The first wave of battery-operated handheld games were, frankly, not too good. They had limited play possibilities, poor graphics, and little versatility. Serious gamers frequently dismissed them as mere children's toys. They just didn't hold a candle to the fine arcade and home programmable videogames that were available.

But technology moves on. Stand-alone games have benefited greatly from the breakthroughs that make this such an exciting hobby. Better designs make the games more challenging. Improved matrixing methods bring better graphics to the tiny playfields. Perhaps best of all, programmability has finally hit the stand-alone field in a big way. Mini-arcades capable of presenting a variety of action games have finally arrived.

The idea of programmability is very appealing to arcaders. It greatly increases the life expectancy of a unit, since the player who tires of one program can just insert another cartridge to enjoy a totally new game.

Of course, programmable tabletop devices aren't a totally new concept. Here's a rundown on some of the trailblazers:

The Great Game Machine by Applied Concepts pioneered programmable stand-alone games. The unit uses cartridges to play several strategy games including chess, checkers, reversi and blackjack. *The Great Game Machine* sells for $229.95, and the cartridges run about $100 each.

Ave Micro System's **Sargon 2.5 Chess Program** also uses cartridges to provide variations. The manufacturer, wanting to be able to upgrade the chess program as improvements became available, designed the system to accept modules. It comes with the chess program, for $875. A checkers module is sold separately for $149.

Quiz game systems also make major use of programmability to enhance play action. M.B. Electronics **Omni Entertainment System** is a deluxe game activated by cartridges. *Omni* uses tape recordings of celebrity emcees to ask the questions, announce the correct answers, and tally the score for each participant. The system retails for around $140, with a dozen or so cartridges available for $15 each.

SELECT-A-GAME

Coleco's **Quiz Wiz Challenger** is a modestly priced unit ($40) that leaves the chore of reading the questions to the human player. The *Challenger* signals which question is to be read aloud from the *Quiz Wiz* question book. The unit then scores each contestant's response. This versatile game currently has a whopping 27 cartridges available.

Several educational toys make successful use of programmability. Coleco's **Magic Touch** is an electronic matching game for the very young (ages 4 to 8). The unit comes with nine two-sided program cards that teach the child to identify people, animals, places and colors. It's practically a kindergarten in its own right!

For slightly older kids, there's the **Electronic Learning Machine** from Coleco. After the player enters the answer to each question, lights and sounds indicate if the answer is correct. It comes with 32 two-sided program cards. There are 15 additional sets of cards available, for ages ranging from preschool to 4th grade.

LeGame by Educational Design (MiniLabs) has 18 variations available for the electronic gamer. Selling for under $10, LeGame is a real bargain. Some of the available programs in-

clude **Checkers**, **Tank Strike**, **Counterspy**, and **Sports**.

But the real excitement is in the standalone action games. There are several programmable units on the market, each with a variety of cartridges, which make these units nearly as versatile as a programmable home videogame system.

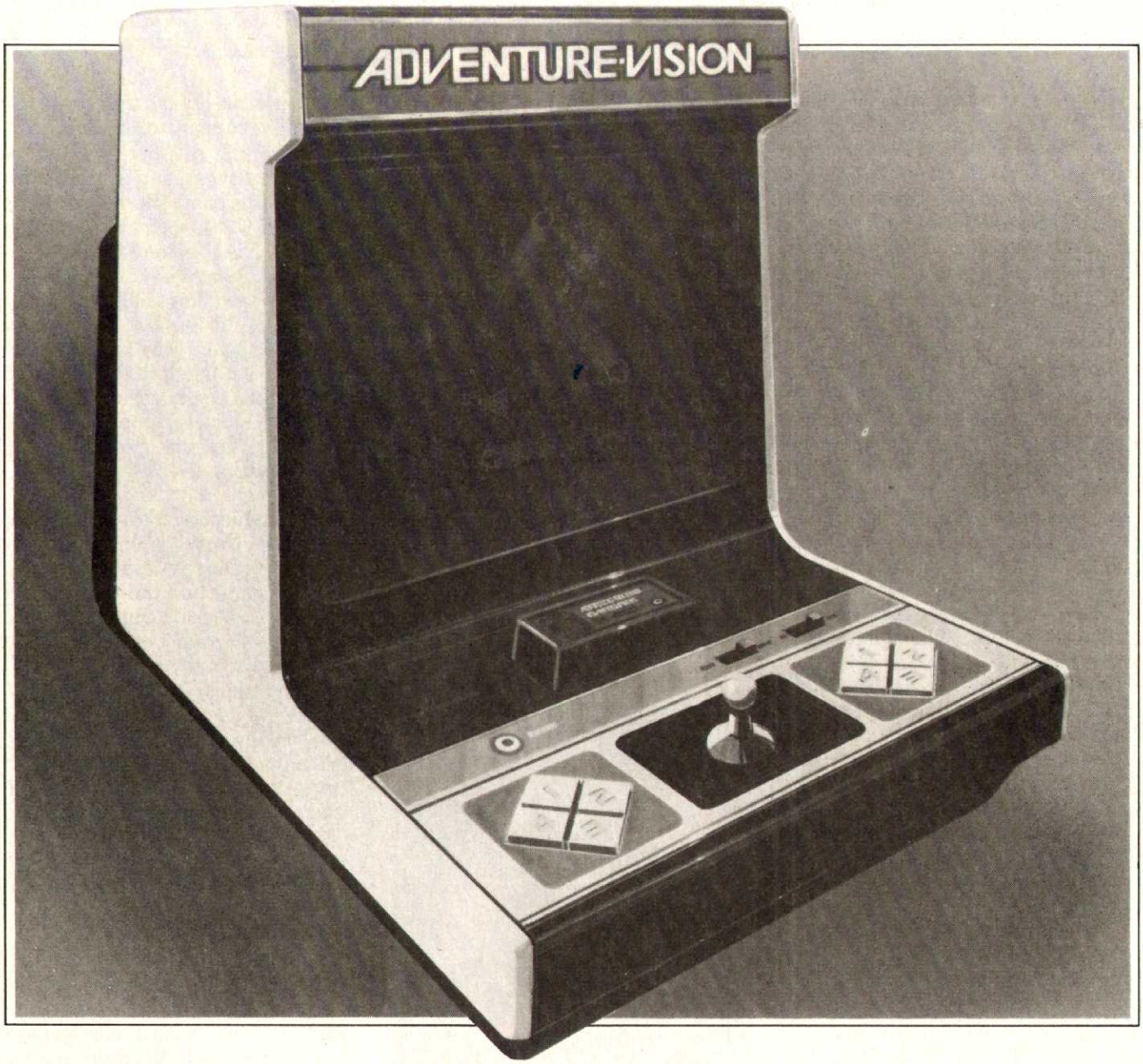
Entex's **Select-A-Game Machine** (around $65) is one of the best portable programmable action game systems available. *Select-a-Game*, playable by one or two participants, features a large two-color fluorescent display. Digital scoring goes to 999 and then rolls over. The action is enhanced by appropriate sound effects. Gamers choose the skill levels and game variation they wish to play. Each contestant has seven control buttons whose functions vary according to the cartridge in use. In most games, buttons 1, 2, 3 and 4 provide directional control.

Game cartridges insert easily into a slot on the bottom, and each cartridge comes with a color overlay to provide the scoring display and playing field for the game.

The *Select-A-Game Machine* comes equipped with **Space Invader 2**. This exciting game, familiar to most players, can be enjoyed solitaire or as a one-on-one contest. In the two-player mode, one commands the alien attack fleet and bombs the other player's cannon and shields, making this an intensly competitive game.

Played solitaire, the arcader uses buttons 2 and 4 to control a cannon, maneuvering it back and forth on the field. Button 5 launches missiles against the attacking force. A fleet of eight ships appears in two rows of four at the top of the screen. Fleet ships are worth 3 to 5 points when destroyed, depending on the distance from the cannon. The player's shields are demolished by taking six bomb hits and disappear when the attack fleet gets low enough on the screen to interfere with them. An Alien Command Ship periodically zips across the upper edge of the playing field. Destruction of this UFO will score 10, 30 or 50 points. The game ends when three cannons have been lost, or if the attack fleet lands at the bottom of the playfield.

At its top skill level, this cartridge makes arcader's fingers fly to keep up



with the aliens scooting across the field.

The graphics leave something to be desired. The UFO, player's cannon and cannon fire are green dots, while the attack force and its bombs are represented by red blips instead of the familiar aliens from the coin-op and full size home arcade versions.

The controls are also a little slow in moving the cannon back and forth. These are minor problems in an otherwise decent system. Entex supports the *Select-A-Game Machine* with a range of cartridges, including **Basketball, Baseball, Football. Pinball, Turtles** and **Battleship**. They retail for $18 each.

Coleco's **Total Control 4**, electronic sports cartridge system (under $50) comes with a four-player football cartridge. One to four can participate in controlling the quarterback and receiver on offense, and the short and deep safety on defense. Run, trap draw and misdirection plays, or throw square in, roll-out and screen passes. *Total Control 4* even allows coaches to set up and run plays straight out of football playbooks. An electronic clock, interception, turnover and score sounds add to the gridiron reality.

Each side of the unit has two, four-direction joysticks. In **Football,** pass/shoot buttons on the console select the offensive and defensive formations before the game begins, then allow the offense to throw or hand off in three directions using the same buttons. Both offensive players are represented on the field by bright lights, and defensive players are symbolized by dim lights. The offense has two blockers, a quarterback and a receiver. The defense has three linemen, a short safety, and a deep safety. The playfield display represents nine yards of a regulation 100-yard field. If the ball carrier makes it down the length of the field without being tackled, he reappears on the display and continues moving toward the goal until he is tackled or scores.

Basketball, **Hockey** and **Soccer** cartridges are also available for under $15 each.

Microvision, by Milton Bradley, is a hand-held programmable system selling for a modest $40. The sleek unit features a black and white liquid crystal display, and comes with the **Block Buster** cartridge. The gamer must use a ball and paddle to knock out all the blocks in a three-layer wall, in this wall-bashing game.

continued on page 74

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VIDEOGAMES GO KING-SIZE!

Home Arcading Meets Projection TV

By Henry B. Cohen

Wanna shoot at 10-foot-tall space invaders? How about blowing up asteroids as big as houses or thundering down a winding road late at night and really feeling like you're at the wheel? If you've ever thought about videogaming on such a grand scale—welcome to the world of giant-screen television.

Spurred by a flock of letters from readers, **Electronic Games** set out to see what happens when games usually played on a 19-in. to 26-in. screen are projected onto screens that measure 50 in. to 120 in. diagonally. We were aided in the accomplishment of this task by New York Video, a prestigious Big Apple retailer that specializes in large screen TV and video accessories.

The proprietors of New York Video offered us a videogamer's dream—the chance to sample as many as two dozen big-screen sets. (Readers within striking distance of this outlet who are condidering buying a projection TV should consider a visit. The store has the Atari VCS, Astro Professional Arcade and Mattel Intellivision ready to go for hands-on demonstrations.)

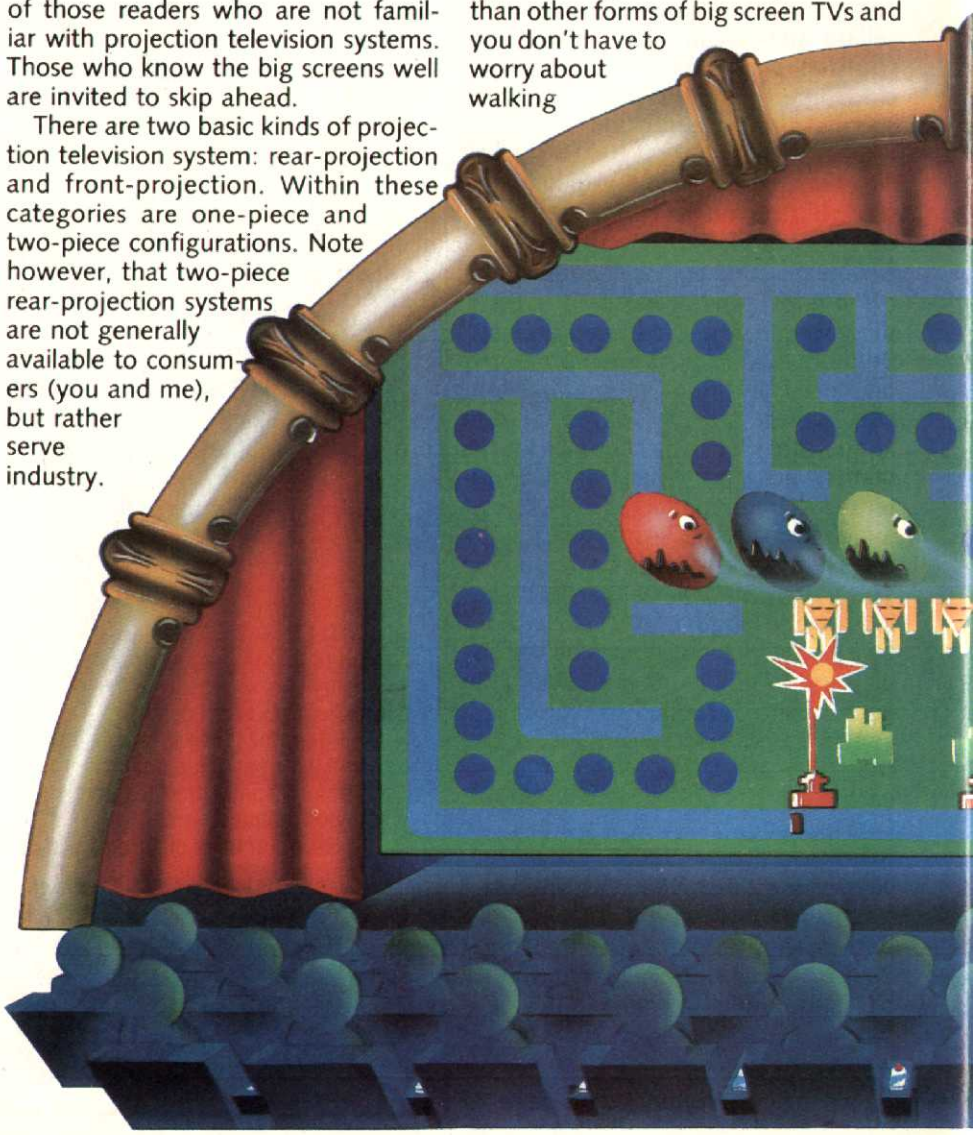
Before giving our findings—which were mostly quite positive, if you can't stand the suspense—some background information about big-screen TVs is in order for the benefit of those readers who are not familiar with projection television systems. Those who know the big screens well are invited to skip ahead.

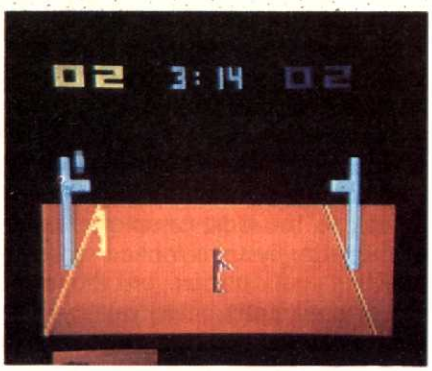
There are two basic kinds of projection television system: rear-projection and front-projection. Within these categories are one-piece and two-piece configurations. Note however, that two-piece rear-projection systems are not generally available to consumers (you and me), but rather serve industry.

To further complicate matters, there are single-lens and three-lens systems available in both front- and rear-projection systems. Sony had marketed a two-lens system, but it is discontinued and for all intents and purposes the three-lens system is becoming standard.

All televisions, whether projection or conventional (CRT—Cathode Ray Tube) operate about the same and use all the familiar controls and features. There is no magic to the big screens, they're the same as the small ones, only larger. The same accessories that work with conventional TVs will operate with big screens.

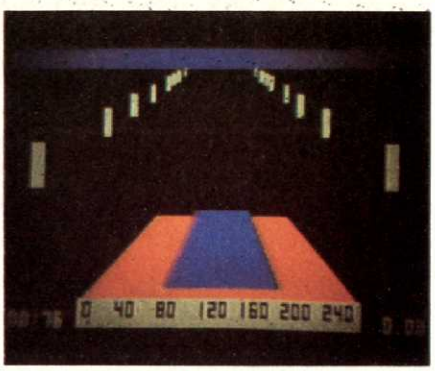
Rear-screen projection units look like enlarged versions of standard television sets. They are usually relegated to a maxium picture size of 50 in., provide a somewhat less bright picture than two-piece devices and must be viewed almost head on for best picture contrast and detail. The primary advantage: They take up less room than other forms of big screen TVs and you don't have to worry about walking





BASKETBALL (KLOSS 78")

SPACE FORTRESS (KLOSS 120")



ZZZAP (KLOSS 120")

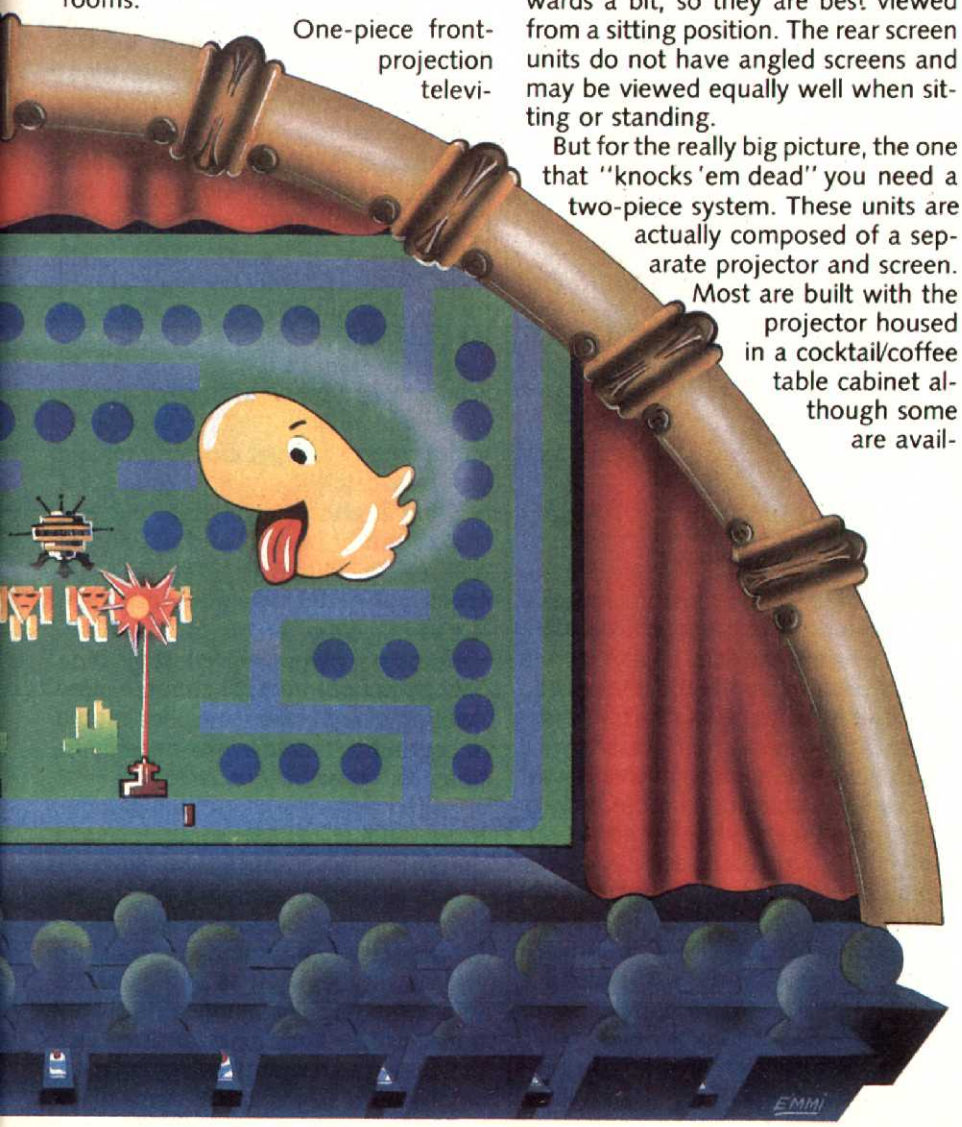
in front of them when they're operating. In addition they have no unusual moving parts and do not require the critical set-up procedures of two-piece units. In the rear-screen TV, the projector is self-contained. It employs a mirror to reflect the image from the projection tubes onto the screen. These sets are convenient, require virtually no special set-up procedures and provide adequate to good picture brightness and clarity in dimly lit rooms.

One-piece front-projection televisions are very popular because they provide greater picture brightness and clarity, can be had in screen sizes up to six ft. and do not take up much more room than the rear screen models. When in use, front-projection sets require a deeper cabinet, since the internally mirrored lower panel must be extended away from the console to provide a light path for the images projected onto the screen. These models tend to angle their screens downwards a bit, so they are best viewed from a sitting position. The rear screen units do not have angled screens and may be viewed equally well when sitting or standing.

But for the really big picture, the one that "knocks 'em dead" you need a two-piece system. These units are actually composed of a separate projector and screen. Most are built with the projector housed in a cocktail/coffee table cabinet although some are available in ceiling mount configurations. Because these giant screens come in two units, the initial set-up procedure is critical to insure the best picture performance. Once the proper alignment is achieved, owners must take care to prevent either of the units from moving out of place. Even a minor mis-alignment of the projector or screen causes a loss of focus in some parts of the picture area and/or elongations and other unwanted optical distortions. In other words (as with motion picture equipment) if the video projector isn't oriented properly with the screen, the picture suffers terribly.

Within the category of two-piece units are single-lens systems and the preferred three-lens designs which are rapidly becoming standard. The two-piece, one-lens system simply places a high-speed projection lens in front of a small screen (11-13 in.) color television set and throws its image onto a relatively small—under 50-in.—screen These units, with one or two exceptions such as the Schudel system, cannot be recommended unless you absolutely must have a big screen image and are restricted in terms of budget. The image is far less bright, because it is limited by the power of the source TV and duller than any other projection system. With some of the single-lens systems a flashlight would be a worthwhile accessory. Additionally, in most cases a minor but necessary electronic modification must be made to the TV to correct for an otherwise inverted image.

If you have the room, the inclination and most important the cash, our best advice would be to select your super-size set from the one-or two-piece



VIDEOGAMES GO KING-SIZE!

front-projection three-lens models, or else choose a rear projection TV. If you must choose a one-lens machine, don't say you weren't warned.

For our project, we used a Pioneer (Hitachi-built) 50-in. one-piece front-projection model and 78- and 120-in. Kloss Novabeam sets. The latter is about as large as you can get, but because of our previous work with this equipment, we were not as awestruck as we might have been by the sheer size of the 10-foot screen.

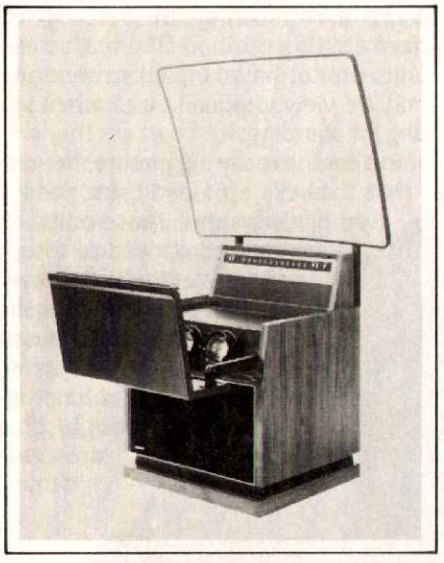
All three units are of three-lens design. This means that a separate projection lens is used for each of the three primary television colors; red, green and blue. This is state-of-the-art equipment capable of producing the brightest, sharpest, clearest and most colorful images possible.

The first impression you get when playing videogames on big screen TVs is that the games have somehow slowed down a little bit. This, of course, is an illusion and not a fact. It does not take an alien any longer to cross a 10-ft. screen than a 10-in. screen—it just looks that way. It must be said, however, that even after several hours of play the slow-speed effect had not yet worn off. The folks at N.Y. Video told us that it does and we believed them. Like anything else it all depends upon what you are used to. We played Atari's **Space Invaders, Superman, Breakout** and **Basketball,** Activision's **Kaboom** and **Laser Blast,** Intellivision's **Major League Baseball** and **Armor Battle,** Astrovision's **Astro Battle, Space Fortress, 280 Zzzap, Clowns, Bally Pin, Football** and **Dog Patch.**

For the very first time our researcher found that he could sit back on a sofa and relax while still maintaining total control over the action. The excitement was there but it was mitigated by creature comfort, not a bad combination.

Interestingly, of all the games played, *280 Zzzap* provided the greatest simulation of reality. On the 10-ft. screen, in a darkened room, it really felt like driving at night, and our test-player kept looking for toll booths. The other games, probably due to their limited graphics, did not create quite the same sensation.

Picture quality, as the photos accompanying this article suggest, did not suffer much, if at all, from the projection process. One of the facts of projection life *may* be noticeable, however. King-size sets cannot achieve pinpoint focus across all areas of the screen. This is particularly true of two-piece models. The primary reason results from the fact that the projector is either placed on the floor pointing upwards or is mounted on the ceiling aiming downwards. If the center of the screen is kept in perfect focus then the upper or lower margins will be somewhat out of focus. This is also true of conventional televisions (for different reasons), but it is much less apparent. With standard TVs, obtaining perfect focus and convergence across 80% of the screen is doing very well. On 7- or 10-ft screens, the lack of perfect focus may become a bit irksome, only because most videogames feature letters or numbers on their upper or lower borders. So if you want the score to read perfectly, the cannon will have to be somewhat fuzzy or vice versa. After several minutes of play it doesn't seem to matter much anyway.



SONY KP-5000

Color and contrast of projected images varied somewhat by game cartridge and size of screen. With the 50-incher, changes were not that apparent. Most of the games looked very similar to what players see on a conventional screen. On the 7- and 10-ft screens, reducing the contrast sharpened the picture. Color levels could be increased somewhat and the total effect was a huge, if slightly washed-out version of the game as it would be presented on a conventional set.

This was true regardless of which game or system was tried. The lower resolution of the Atari system, versus the somewhat higher resolution of the Astro Pro Arcade and Intellivision, did not seem obvious on the big screens. Of course, the more complex graphics of the latter systems looked more interesting and attractive, but they were not of apparently better quality. This was somewhat surprising as our technical aces had expected Atari to look a bit poorer than its more expensive competition, but Atari's skillful use of graphics made quite a difference. On the subject of graphics, it was somewhat disappointing that the broadcast quality signal, claimed for the Astrovision system was not obvious up on the big screen. Perhaps it would be visible on videotape—as empirically it should—but it was not observed on the projection sets used. This was by no means a formal test of the Astro unit, however, and so must not be taken as gospel in this regard.

The bottom line: If you're going to choose a videogame system by the way it looks on a projection television, use the same criteria as you would for a conventional television.

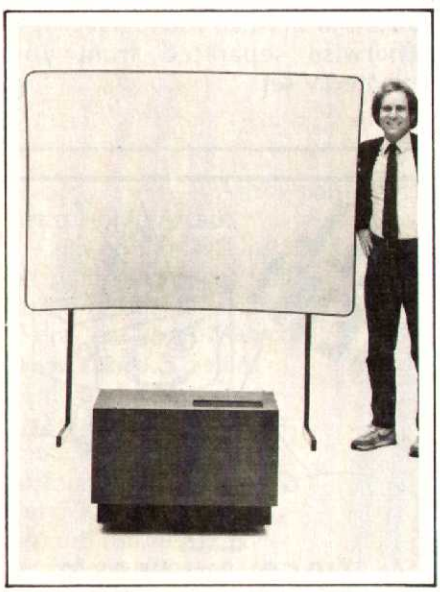
The large TV screens tend to underscore a simple fact of videogame life. More complex graphics are needed. On the small screen, games may 'look' quite good. The screen appears to be mainly filled up by graphics, and large areas of uniform, unblemished color are rarely noticed. On a 7- or 10-ft. screen, the absence of "visuals" becomes painfully clear. A lone space invader doesn't take up much room, and you may catch yourself wishing for a brightly lit and colorful star field and some form of background activity. In this regard, games like **Space Fortress** look better simply because there is more going on all of the time. Perhaps as ownership of projection TVs becomes more common, game designers will take this "lonesome background" factor into consideration. For now, there is simply not enough memory built into the systems to warrant using any space for such purposes.

A final consideration in going large-screen concerns one of the less desirable aspects of large image projection and viewing: Every flaw or fault of the source material is magnified. Probably due to production line inconsistencies, there is enough variation in color levels among both games and systems to re-

quire a good deal of fine tuning of color, contrast and brightness levels when switching cartridges. Combined with the need to insure the focus of critical on-screen objects, this makes using a two-piece projection system somewhat more troublesome than a one-piece or standard television set. Fortunately none of these negatives stack up when measured against the joys of the large picture. They are simply points to think about before you take the plunge. (Another matter, that of projection tube burn-in is addressed in the sidebar to this article.)

If you can afford a large screen television you are probably enjoying playing videogames on it now. If you are thinking about the purchase of one specifically for gaming, **EG** advises that you try them out for yourself. The benefits, or lack of them, will become immediately apparent to you.

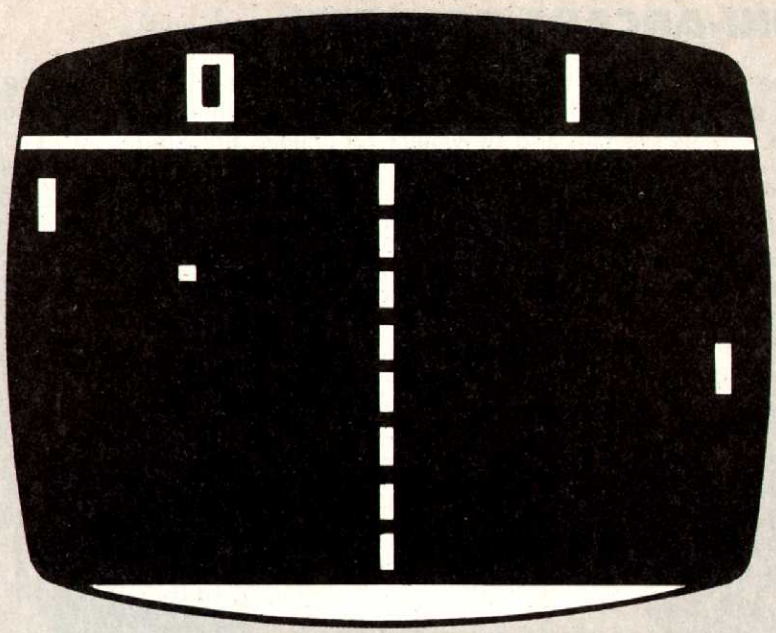
Our analyst enjoyed the large screen experience and found that it did not detract from playing the games in any way. On the other hand, some may



KLOSS NOVABEAM

feel that the cost of projection televisions is steep for arcading alone. For viewing things like movies on Laservision videodiscs, played back in stereo, they are certainly worth their price. Also as noted, game playing seemed a bit more relaxed on the big screen. If you tend to get frantic at times when playing videogames, the big screen may help cure the problem. If you enjoy the frenetisism then the largest screens may actually detract from the videogaming experience.

But if the question is: Do projection television systems work well with videogame systems, the answer is an unequivocal "Yes".



Projecting Your Video Game Safely

In the Intellivision Owners Manual is a warning concerning the use of certain game cartridges with projection television sets. The alert counsels players to consult the owners manual for his or her projection TV for specific instructions regarding the hookup and use of electronic games.

This warning reference is designed to avoid "burn-ins", permanently etched-after images, affecting both standard and, especially, projection TVs during the early days of videogames. The original videogames used high intensity stationary graphics to form the on-screen playfield which, if left on the screen long enough, caused the after-image to remain visible during the life of the projection or standard TV picture tube (s) involved.

Times have changed. Early projection TVs ran electronically "hot" so that their pictures were viewable even under low light conditions. Perhaps you recall that the first projection sets you saw in operation were always dim, even in fairly darkened rooms. One consequence was that heavy usage of games like **Pong** would, over time, burn the image of the playfield into the innards of the very expensive projection tubes. On standard TVs, these images were burned into the picture tube itself.

The vastly more efficient projection TVs of today run a good deal "cooler" then their ancestors. Moreover, improvements in the reflectivity of and durability of screens and projection tubes enable the current crop of king-size TVs to handle on-screen graphics without the burn-in problems of yesteryear. To further combat burning in, game cartridges are engineered to alter the color and intensity of their graphics to prevent damage.

Remember that you cannot damage the screen of a projection TV system no matter how much light you throw upon it. You may however, harm the projection tubes if you insist on abusing them forever. The projection tubes, not the screen, are the equivalent of the picture tube in a standard TV.

Certain Intellivision cartridges such as **Major League Baseball** use a stationary on-screen graphic. In this case, it's the running line of the playfield's diamond. It would not be advisable to play such cartridges hour after hour, day after day, using full brightness or contrast. You just might cause some burn-in of the projection tubes. To further prevent such disasters, the Intellivision unit is built to shut down if not used for a period of over two minutes. This prevents a careless adult or child from leaving the game "on" but unattended.

Most standard TVs aren't hurt by overuse of continual stationary on-screen graphics. Some projection systems may still be vulnerable to such a mishap and prudence dictates that, after refering to the system's owners manual, you reduce contrast and brightness as much as possible when projecting videogames with stationary graphics.

The same rule holds for home computers, cable TV newswires etc. If the graphics don't change often, lower the contrast and brightness.

The player selects the number of balls, one to nine, and the speed of the serve. The paddle can also be varied from double to triple width. Pressing "Go" serves the ball. The arcader utilizes the control knob to move the paddle from side to side, bouncing the ball into the wall. Each time the ball hits a block, it is eliminated. A new wall appears when the old one is completely destroyed. At slow speed, the pace automatically increases when a block in the top row is hit. Gamers score one point for each block in the bottom row, two points for each in the middle row, and three points for each brick in the top row. A complete wall counts 96 points, and scoring rolls over after 999.

The graphics are simple, consisting of small square blocks. But the action is fast and at top speed will challenge even the most adept player. The unit fits comfortably into one hand, leaving the other hand free for the controls.

M. B. Electronics has an entire library of cartridges for *Microvision*, selling for around $17 each. These include **Star Trek Phaser Strike**, **Bowling**, **Slot Machine**, **Pinball**, **Cosmic Conflict**, and **Super Breakout**.

New this summer from Entex is **AdventureVision.** This is a state-of-the-art unit, featuring a revolutionary 6,000 dot matrix display. One or two gamers can play, using a joystick and four control buttons. Styled like an arcade game, this upright stand-alone is further enhanced by striking sound effects.

SPACE INVADERS GOES MINI

But the real story is in the intricate graphics. The 6,000 light locations create images that Entex claims have more than 20 times the resolution of any other hand-held game on the market.

The game system, priced at around $75, comes with a **Defender** cartridge, modeled after the popular arcade game by Williams. Wave after wave of attacking aliens threaten humans who must be protected by the player's defender jet.

Additional cartridges made for *AdventureVision* are also based on arcade games, including **Turtles**, **Super Cobra**, and **Space Force**, for less than $15 each.

No mini-programmable is yet capable of matching the performance of any standard programmable videogame system, much less the razzle-dazzle graphics of the senior systems. But the new generation of portable arcades is ideal when you're traveling or otherwise separated from your favorite TV set.

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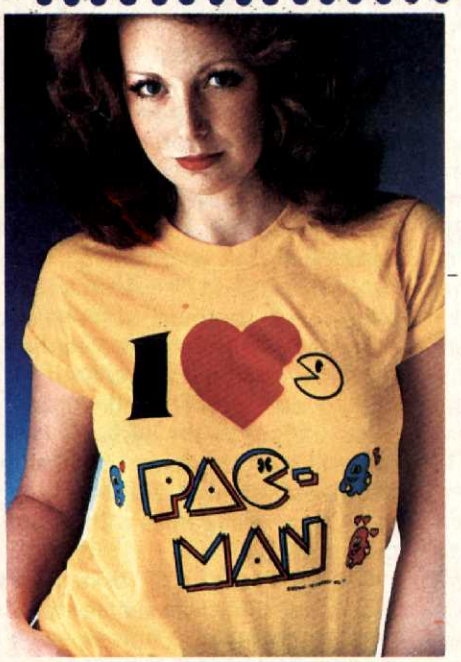

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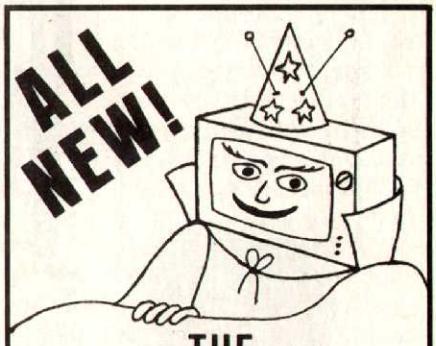

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PROGRAMMABLE PARADE

By Arnie Katz and Bill Kunkel

Man the Cosmic Ramparts!

Space Fortress/Astrovision/Astro Home Arcade

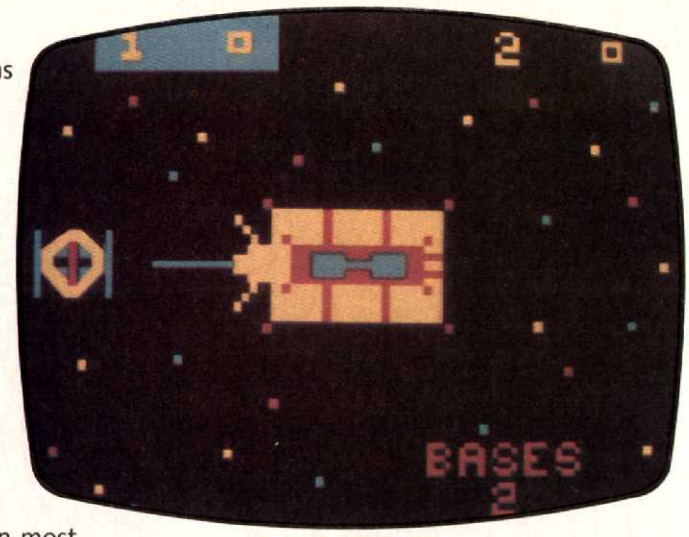
Coin-op fans will instantly recognize this super fast-action arcade-style space shoot-'em-up as Midway's **Space Zap.** Gamers command a centrally located command fortress capable of firing in any of four directions—North, East, South and West. From those respective positions at the top, bottom and sides of the playfield emerge alien laser-cannons and the occasional, free-flying mystery ship.

As the contest commences, these enemy intrusions are infrequent, appearing at a leisurely pace and waiting a good while before actually firing. Once a cannon fires its laser torpedo, the missile can be detonated by a burst from the player's fortress, and a second blast will be required to eliminate the cannon itself.

Graphics in this Bob Ogdon (of Dave Nutting Associates) creation are crisp and convincing, but it's primary claim as a space action classic is as the world's fastest home blast-'em-up sf videogame. Once the player has gotten the feel of the play mechanic, things really start jumping. The fortress is soon transformed into a whirling dervish of destruction, spinning crazily and spitting out flaming death. This is *not* the sort of game that arcaders will find themselves playing compulsively for hours. Wrists give out after about ten min-

utes of heavy duty action. Play sessions will be brief but intense.

The most difficult obstacle players will encounter, aside from weakness of the flesh will be the UFO/mystery ship. Strategically, at all but the highest levels—where it must be incinerated at the first opportunity—play a waiting game. As in most space shoot-outs of a linear type (such as **Space Invaders, Spacechase** and **Demon Attack**) it's best to let the enemy come to you in preference to actively chasing after him. Sit patiently, but once the enemy strays into range, hesitate not.



SPACE FORTRESS

Perhaps the most manic space battle of all time, **Space Fortress** will leave you gasping. But you'll always come back for more.

Trickshot/Imagic/Atari VCS

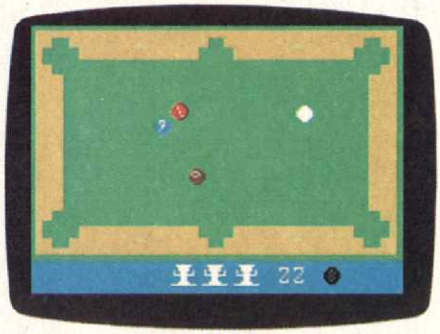
Trickshot is a programmable pool simulation like nothing computer gamers have ever seen before. Players are offered scaled down one-and two-player versions of eightball, for the purists, but the real interest comes from the wide range of "show off" pool shooting set-ups.

One of the major problems faced by designers in programming for the Atari VCS is its otherwise limited screen-RAM—the number of on-screen objects that can be simultaneously manipulated. Therefore, a full nine billiard balls rolling around on a VCS playfield was absolutely out of the question. Imagic has wisely decided to limit the number of balls on screen at any one time to four, and even these spheres blink when the program periodically replenishes the images. Eightball, therefore, is played with a cue ball and three target balls.

The real challenge, however, comes when players must sink combinations of one, two and three balls with a single "trickshot". Determining the correct angle and applying the correct "english" may take some time, but the rewards of sinking three targets with a single stroke will make you feel like a prime contender for a low-calorie beer commercial.

Players shoot by rotating the visible tip of their cue stick in a 360° revolution around the cue ball. The cue ball will travel in the direction dictated by the cue tip's position. There are 16 possible positions—twice as many as are offered in other programmable pool contests—and players can also add topspin, backspin or left/right english to any shots.

The balls roll and drop into pockets with remarkable realism. The graphics, which present an overview of a green



TRICKSHOT

felt table with position markings and six pockets, are colorful and pleasant, while the balls are given a sense of dimension by cunningly applied shading. The sounds are unerring as balls clack together and drop into the pockets with a satisfying "thunk". There is even a version of English Billiards offered among the 14 possible variations. Winners are signified by the appearance of a trophy cup beside their score.

A leisurely paced videogame that should prove a captivating change of pace for both male and female home arcaders, *Trickshot* may well be a sleeper hit for Imagic.

Galactic Invasion/Astrovision/Astro Professional Arcade

Up to four players can compete in this home version of Namco's well-known **Galaxian** coin-op. Options include a choice of four levels of difficulty and the ability to set the number of cannons given to each participant.

As most arcaders already know, *Galaxian* is a sort of "son of Space Invaders". Gamers move a laser cannon horizontally and fire upward at a swarm of insectoid creatures. Periodically, a trio of invaders peels off from the main body of attackers to sweep down and across the playfield, spraying the ground below with deadly bombs.

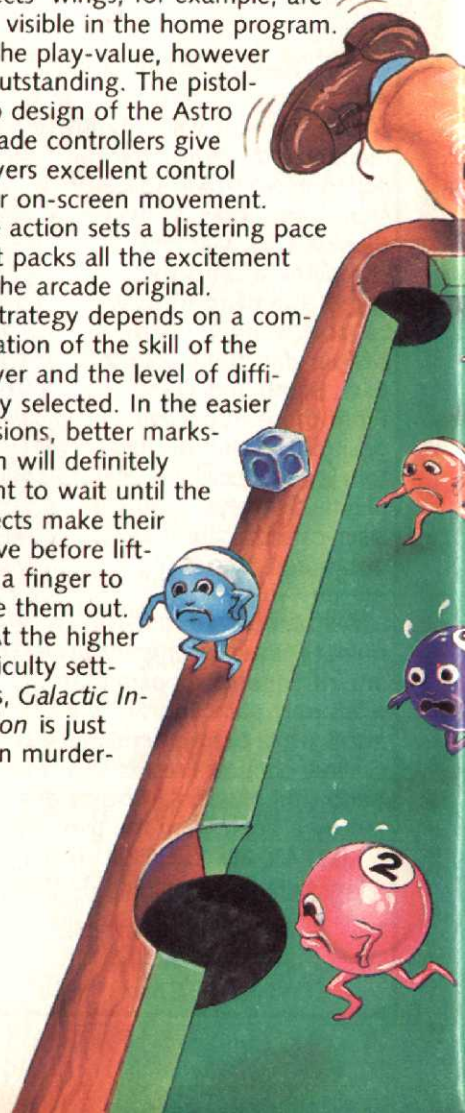
The aliens are a lot easier to hit while they're still in formation, but better players will always withhold fire until some begin to swoop. An attack is worth twice as much when it is zapped in the midst of a divebombing run.

Galactic Invasion's graphics are nice and colorful, but they don't quite match the artistic detail of the drawings used in the coin-op machine. The insects' wings, for example, are not visible in the home program.

The play-value, however is outstanding. The pistol-grip design of the Astro Arcade controllers give players excellent control over on-screen movement. The action sets a blistering pace that packs all the excitement of the arcade original.

Strategy depends on a combination of the skill of the player and the level of difficulty selected. In the easier versions, better marksmen will definitely want to wait until the insects make their move before lifting a finger to take them out.

At the higher difficulty settings, *Galactic Invasion* is just plain murder-



ous. Deadly aliens streak across the screen to ram the defending cannon and are capable of dropping a dozen bombs in one pass. Only the top gunners should sit back and wait for the bugs to make the first move. If they so much as twitch, blast 'em immediately. Once a three-insect group begins a sweep, all but the super-shots are virtually assured of being one "life" down by the time the maneuver is completed.

The aliens always break formation from the sides. Therefore, a wise arcader will begin to attack from either the extreme left or right side of the playfield. That way, you'll have a good chance to eliminate the invaders before they come barrelling down the screen at your gun.

Galactic Invasion is one of the first cartridges Astrovision has released since acquiring the Professional Arcade from Bally. It is exactly the kind of well-conceived entry that should get all home arcaders to sit up and take notice of the revived system.

Boxing/Mattel/Intellivision

Mattel has achieved quite a reputation for its outstanding sports simulations in the past, and video athletes will be pleased to hear that the company's design staff has entirely lived up to its image with **Boxing.** This two-player contest dishes out a full measure of fistic thrills while providing the most accurate simulation of ring action ever provided by an electronic game program.

This cartridge, like most of the sports titles produced for the Intellivision, offers the participants an unusually wide range of options. The game plays at any of four basic speeds, beginning with the rather pokey "training camp" speed and rising to the fastest setting, "championship" speed. Regardless of the speed at which the action takes place, each *Boxing* fight consists of 15 pounds, each one a simulated 1.5 minutes in duration.

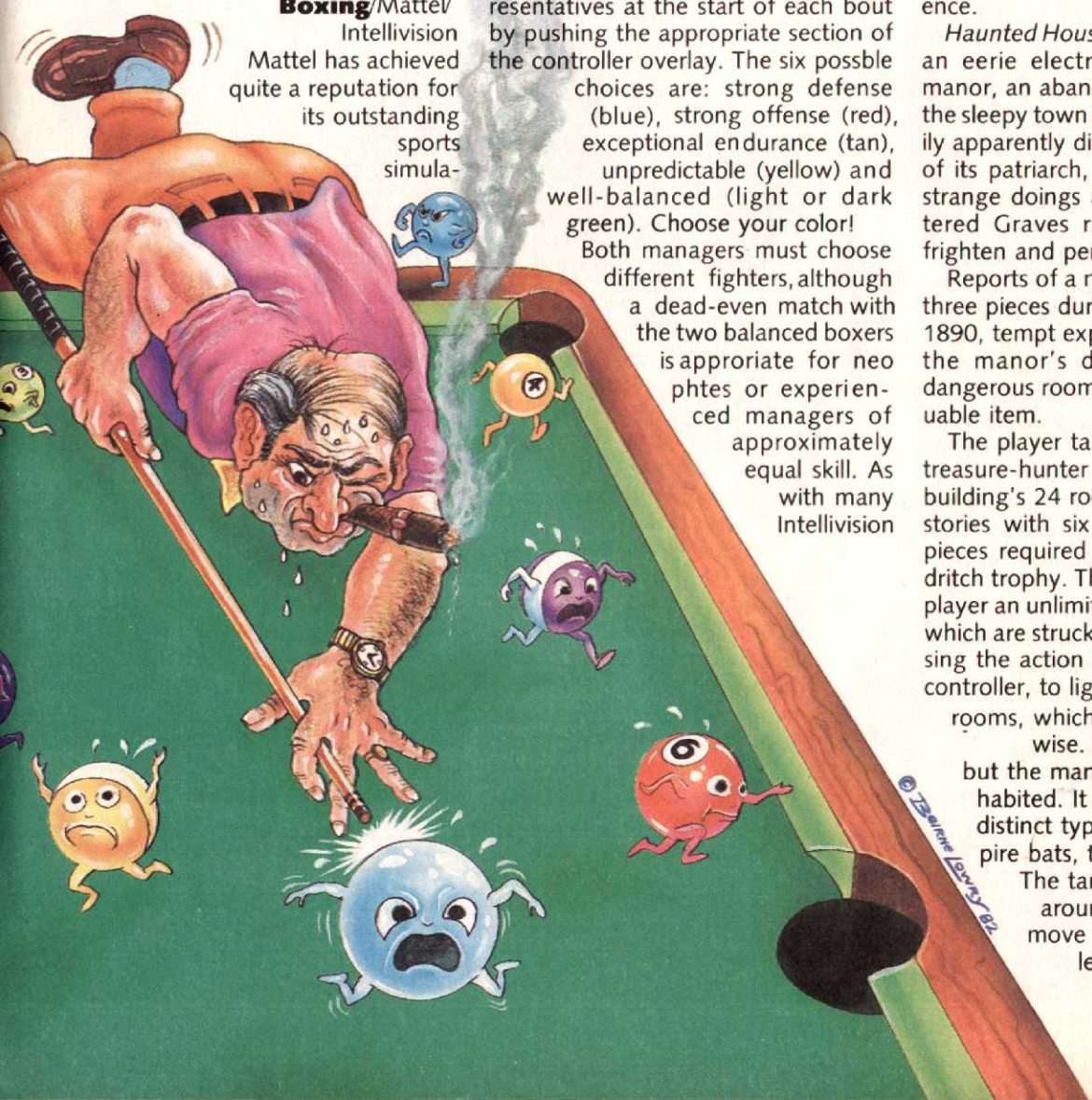
The choice of fighter is also up to the human managers. There are six different pugilists in the program's stable, and each one embodies a somewhat different approach to the sport (except for the pair that are exactly alike).

Managers select their ring representatives at the start of each bout by pushing the appropriate section of the controller overlay. The six possble choices are: strong defense (blue), strong offense (red), exceptional endurance (tan), unpredictable (yellow) and well-balanced (light or dark green). Choose your color!

Both managers must choose different fighters, although a dead-even match with the two balanced boxers is approriate for neophtes or experienced managers of approximately equal skill. As with many Intellivision cartridges, a better choice and assignment of on-screen colors would have improved things, since there's no particular reason why the two equal fighters had to be colored so similarly.

The name of this game is punch selection. Each combatant can throw rights or lefts to the head or body, feint with either hand or even duck. Landing a blow anywhere scores one point, and the computer will simulate a knockdown or even knockout when one of the fighters has absorbed too much punishment.

Boxing is a fine treatment of a sport seldom covered by videogames.



Haunted House/Atari/Atari VCS

Ever since **Adventure** first appeared on the VCS scene to delight the quest-minded, loyal fans have watched the store shelves for a sequel. Atari has taken its time about providing one, but the drought has finally ended. **Haunted House** is a solitaire adventure which, while differing significantly from the earlier cartridge, should appeal to much the same audience.

Haunted House takes the arcader on an eerie electronic visit to Graves manor, an abandoned pile of stone in the sleepy town of Spirit Bay. The family apparently died out with the death of its patriarch, old man Graves, but strange doings at the dark and shuttered Graves residence periodically frighten and perplex the localites.

Reports of a magic urn, broken into three pieces during the earthquake of 1890, tempt explorers to venture into the manor's dark and sometimes dangerous rooms in search of this valuable item.

The player takes the role of such a treasure-hunter and must search the building's 24 rooms, arranged as four stories with six rooms each, for the pieces required to reassemble the eldritch trophy. The program gives each player an unlimited supply of matches, which are struck one at a time by pressing the action button of the joystick controller, to light a path through the rooms, which are pitch-dark otherwise. The people are gone, but the mansion is far from uninhabited. It is populated by three distinct types of creatures: vampire bats, tarantulas and ghosts. The tarantulas scuttle slowly around the place, the bats move more quickly on their leathery wings and the

ghost can travel through locked doors and solid walls at will.

Any time one of these marauding monsters touches the player—symbolized on-screen by a pair of shining eyes—it costs the seeker one life. Like a cat, you've got nine of them. Winning the game consists of collecting the pieces of the urn and conveying them safely to the front door of Graves Manor before one of the nasties takes your ninth life.

An enchanted scepter hidden somewhere in the haunted house offers the player a measure of protection. No creature can touch the player while he or she holds the scepter. Unfortunately, a player can only handle one object at a time. So just as in *Adventure,* the gamer will be doing a constant juggling act.

Also secreted in the house is a magic key. This comes in especially handy in the more difficult variations, in which some of the doors between rooms are locked to prevent easy access.

Movement between floors is accomplished by taking a staircase. Each either ascends or descends, and none permit the player to go back down the way he or she came. You wouldn't want things *too* easy, would you?

Scoring is a trifle fuzzy, though the real test of an arcader's skill is simply the completion of the quest for the urn in a reasonable amount of time. You can judge your performance by noting the number of lives expended and the number of matches burned during the course of the game. It would've been nice if the scoring system had created a ratio between these two factors, since they aren't of equal importance. (As a guess, burning up two matches might be equivalent to losing a life.)

This game's audio-visual trimmings are excellent. It is much more atmospheric than *Adventure* and gives the arcader the spine-tingling sensation that something sinister and supernatural is just about to happen.

Haunted House is one of the most intriguing and novel videogame cartridges to appear in some time.

The Terribles of Tempest!

By Bill Heineman

Editor's note: We all like to think about the videogame worlds we so frequently visit. What arcader hasn't wondered about the defeated planet of **Defender**? *Who hasn't thought about the world living under constant attack in* **Missile Command**? *Bill Heineman, videogamer supreme, alias Dr. Death –his "vanity board" monicker known to all Californian arcaders –has thought a lot about the worlds he plays in. He even began making up stories to go with his favorites. "I found it really helped me in explaining strategy to someone," he commented recently, "to make the game world real. I've really gotten into it."*

What follows is not only a primer on how to play **Tempest**, *Atari's coin-op supersmash, but the story behind the game. We hope you enjoy it.*

In our universe there are four dimensions: the dimensions of height, width, depth and time. There exists a universe in a dimension beyond the boundaries of our own physical universe, a dimension which we call the twilight zone.

This universe consists of pure energy because matter simply cannot exist here. There is an energy world populated by the friendly race of Yawas. Yawas are beings of pure energy and no physical bodies. They construct bodies for themselves out of the abundant energy found on their home world. They take on the appearance of little yellow claws and change color according to their mood.

The Yawa race lived in total peace until they were invaded by the Tempest Terribles. The Terribles come from a faraway galaxy and were envious of the calm that ruled the Yawa world. The Terribles decided to be terrible and destroy the Yawa race.

The evil Tempest race reached the Yawa world by constructing a number of space platforms and simply climbed up. The platforms are composed of a pure energy grid, 16 sectors across, and they come in various shapes and sizes. In retaliation for the attack, the Yawas prepared to send their bravest warrior to conquer the platforms so the passages between the two worlds can be cut off forever and peace will be restored once again. The Yawa chosen for this dangerous mission was picked by drawing lots, and Deka lost.

Deka, after being suckered into this mess, takes this mission and is outfitted with a laser bomb launcher as well as a Superzapper and enough energy to make three bodies. Deka will get more energy with which to make bodies for every 20,000 kill points he gets. However, Deka can store no more than five bodies worth of energy at any given time.

The launcher has an unlimited supply of energy bombs, but, the Superzapper can only be used twice per level. The first time the Superzapper is used, it kills every living thing on the platform. The second time it's used, it kills one enemy randomly. If a hyperspace jump between two platforms is successful then the Superzapper will be recharged; hyperspace is the only way to renew the weapon.

Deka is then sent into space to save the world. He finds he can sneak by the first eight levels because these are guarded by a bunch of dummies. The ones on which he can land are the first, third, fifth, seventh and the ninth level. The higher the number, the harder it is to take the level and advance into hyperspace.

Our hero decides to land on level one and succeeds. Deka immediately forms a body and the attack begins. The Terribles jump from their resting places in space and land on level one. Expecting little resistance, the Terribles mutate from their non-physical bodies to form Flipper-type bodies. The Flippers climb straight up to kill this defender of peace. Deka moves over each Flipper and fires a short blast from his launcher, killing anyone who is in the sector through which the lasers are traveling.

As each Flipper bites the dust, 150 kill points are put on Deka's honor sheet. But one Flipper made it past the barrage of laser fire and starts to walk along the edge of the rim of this circular energy field. Deka holds his fire until the Flipper is next to him and as the Flipper makes its final flip, the Yawa wastes the Flipper with a short pulse of the launcher. When every enemy has been killed, Deka leaps off the rim and makes a hyperspace jump to level two.

The Flippers of level two are now wise to Deka's method of attack and begin to flip the instant they land on the energy field. The enemies also fire more accurately than the ones on level one. The Yawa moves and fires at every living thing that dares to come up. After all its comrades had been killed, the last Flipper makes it to the rim. Deka, seeing that the final enemy is on the edge, makes a flying leap down the sector on which he is standing, jumps into hyperspace, and leaves the Terrible far behind.

The enemies of level three now mutate into Tankers; creatures with

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the ability to split into two separate beings. When Tankers are shot or make it to the rim, they divide into Flippers which begin jogging toward the hero.

When Deka completes the jump to level four, he notices another new enemy, as if he didn't have his hands full already! The Spiker is a foe that can create a large spike to climb up on. However, this enemy somehow can't make enough spike to reach the rim.

When all the enemies have been killed, a warning appears for a very short time, but Deka ignores the message. Deka then jumps off the rim and lands right on top of a spike. Being shish-ka-bobbed was not the most pleasurable experience one could have, but it serves to teach our hero to remember to keep his launcher firing all the way down and to avoid the spikes.

Upon reaching the eighth level, there will be no more spike warnings. The 11th level has (oh crud!) another new enemy. The Fuseball is a circle of stuttering energy that is very hard to hit with the laser. The Fuseball moves very differently than any other enemy; it can go up and down the platform at will. Deka finds that the only way to kill a Fuseball is to shoot it when it is **not on the rim** and heading to the left or the right.

The hero finds that the best way to stay alive is to remain in one place and rapidly pulse his shots at frequent intervals. This will kill any enemy that even tries to get on the same sector as Deka. There is one drawback: the Fuseballs are almost completely unaffected by this attack pattern because of their ability to move up and down the grid lines without getting shot.

The 17th level is attained and—egads—, the Pulsars begin their defense of the lower levels. The Pulsars have a mild version of the Superzapper. When the Pulsar is flat, it is completely harmless, but if the Pulsar is fully charged, then a bolt of electricity will go up the sector to the rim. If Deka is directly above the Pulsar when charged, you can kiss another body good-by.

After a very long battle, the 33rd level is attained! Unfortunately, there is yet another new enemy. The Super Tanker looks very similar to the standard Tanker with the exception of a little wavy line in its window. Hit the Super Tanker, and it splits into two Fuseballs or Pulsars, making life very difficult for our hero. The Super Tanker has the same point value as the Standard Tanker, unfortunately.

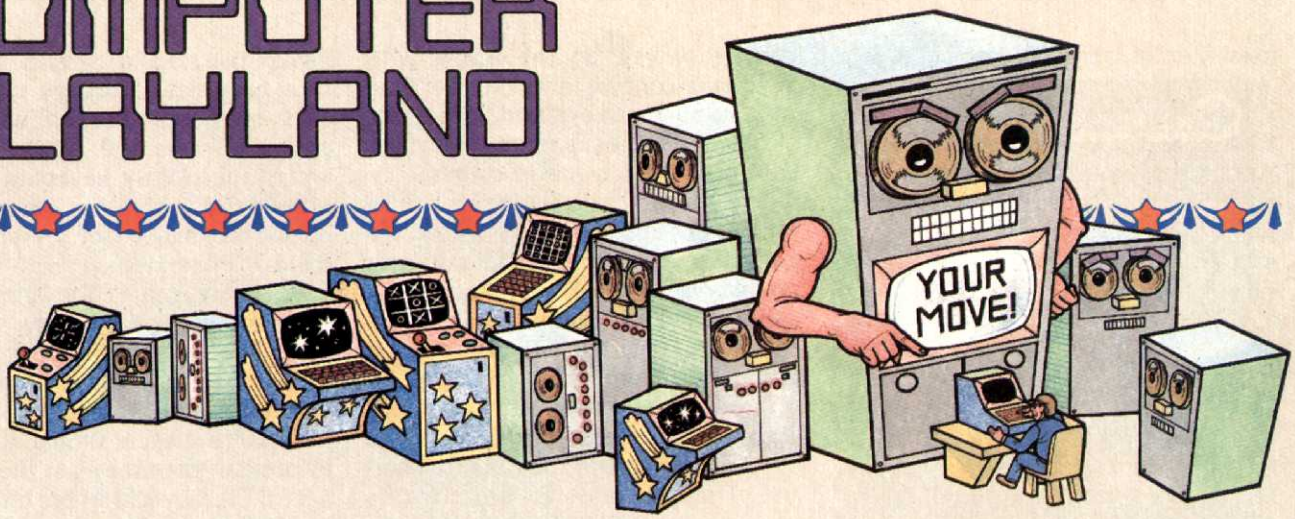
When a Super Tanker splits into Fuseballs, the new creatures can jump as much as two sectors away from the doomed Tanker and proceed to the rim. The little Yawa lost many bodies to find this out. If our hero has no Superzapper and the Fuseballs are closing in, there are two alternatives still available. The first is to jump into hyperspace and ditch the enemies. Of course, this can't be used if there are still creatures on the grid and not on the rim. The second alternative is very risky. If there isn't enough time to make the hyperspace jump, then Deka must move himself quickly enough to jump over the Fuseballs. It's too bad the Fuseballs can't be shot dead when on the rim.

Deka had so many bodies destroyed that he finally lost all energy with which to make potential bodies (Shish-Ka-Bobbed, Shot, Captured, Evaporated, and Superzapped). He immediately returns home, pays a recharge fee, gets his score erased, and jumps back into the fray at the level previous to the one at which he failed.

Deka makes it past the blue, red, yellow, light blue, black, yellow/orange and the green levels, and then finally makes it to level 99, where he once again encounters conflict. Victory is attained by a very narrow margin, and this little Yawa jumps into hyperspace, hoping to land on the alien's home planet. To the warrior's horror, he finds yet another platform beyond number 99. This new platform is also considered level 99, but its shape doesn't come in the same, predetermined order as was previously found with all other platforms.

It didn't take very long for Deka to discover that there isn't any alien home world. In fact, the Tempest Terribles lived on these platforms in a manner very similar to that of nomads, continually hoping and searching for a place to make their home. Unfortunately, the Terribles have decided to make the Yawa world their new home, so we leave our hero to battle these unwelcome creatures until they either make peace or run out of Terribles. Will you help this heroic Yawa? Deka can surely use all the help he can get.

COMPUTER PLAYLAND



Mouskattack/On-Line/Atari 400 & 800/32K disk

Mouskattack takes the now-famous **Jawbreaker** maze and plays a clever variation on the coin-op cutie, **Frisky Tom.** In the arcade game, Tom's a plumber trying to assemble a Rube Goldberg-like pipeline through a maze while being hassled from all sides by bomb-throwing mice and similarly wacky denizens of the plumbing underground. Tom's aim in life is to keep the bathtub filled with water, so that the beautiful blonde bather bobs to the surface.

In this home variation, gamers also assume the role of plumber in the infamous maze of sewers known as "Rat Alley". The rats here are pretty heavy, and more than one plumber has already disappeared—with only his cap found floating in the sewers. The goal is to fill the maze with plumbing—the *correct* plumbing, mind you, including the correct type of joints, pipe, etc—while avoiding the sewer rats.

This isn't easy. The plumber gets a couple of traps and two cats. The cats won't do anything, but their presence serves to keep away the ordinary rats. They're usually placed by the entrances to the escape tunnel, to keep the rats from pursuing your valiant plumber. You can put them anywhere you choose, however. Rats can be killed for bonus points by hitting them with piping while they're caught in the traps, which don't hold them too long under the best of conditions.

Kill too many normal rats, however, and the super-rats start to show up. These are distinguished by the big, red "S" on their sweaters and they eat cats, traps and plumbers without a second thought.

Pipe is laid automatically as the player passes the plumber over the maze, using the joystick controller. Frequently, the pipe is bad and must be re-laid. This happens randomly. Another trouble-spot is the joints. At curves, plumbers must lay a "J" joint, while at intersections, a "T" joint is necessary. Unless the game is being played on a five foot screen, it is virtually impossible to detect an improper joint. Granted, on the Atari computer, players can always hit the "P" key,

MOUSKATTACK/Continued

MOUSKATTACK

stopping the game at any point. This should not be necessary, however, because any time a play element is *this* hard to handle, it's the program that's at fault. The cute but scanty instructions don't help matters, either.

The subject matter is fairly distasteful, the play mechanics are tiresome—especially on the eyes, which may become badly strained—and the graphics are only mediocre, at least by On-Line's incredibly high standards. And don't expect any cute, graphic rewards for high scoring—such as the toothbrush that cleans your choppers in *Jawbreaker*. The only compensation for your eye-strain is yet another playfield.

Mouskattack is only partially successful and even, hard though it is to believe, looks rushed. On-Line is doing Atari owners a great service by translating its wonderful Apple II arcade software for the 400/800, especially when the games are as extraordinary as **Crossfire.** But *Mouskattack*, to quote a character in the "Wizard of *Id*" comic strip who had only rodents to dine on in his awful dungeon is "a good rat. . . but it wasn't a *great* rat." (Bill Kunkel)

Crossfire/On-Line/Apple II (48K)/Atari 400 & 800 (32K)

Crossfire by On-Line Systems is a fascinating game that can be played for the Apple II+ and Atari computers. The program requires a disk drive and can be played on the Apple with keyboard controls and on the Atari with joystick or keyboard. This game clearly shows the superiority of joystick control for arcade action contests.

The game's basic concept is simple enough. The playfield is composed of a colorful seven by six grid that simulates an overview of 36 city blocks. The player appears in the second grid from the bottom with enemies stationed along the top and sides of the grid.

The player has free movement through the maze, but is restricted from venturing into the outer perimeter. The object is to destroy the monsters without having the on-screen player surrogate killed three times.

When an alien is hit, it changes into another type of creature, then another and another, every time it is struck. After passing through four such transformations—each incarnation more deadly than the previous one—the alien menaces are finally, totally, destroyed. The action then resumes at a slightly more difficult level.

The number of bullets is limited. When the player is running low, a blinking diamond lights up somewhere within the grid. The player's cannon must pass over it to replenish the ammunition supply. At the center of the grid are four objects, enclosed within the blocks, that periodically enter the player's space. By rolling over these bonus items, additional points are garnered.

The Atari version is one of the best games released to date. It combines fine graphics, strategy of almost chess-level sophistication, and all-out action. Unlike the Apple version, where the clumsy keyboard controls often detract from the otherwise excellent play action, the joystick movement is integrated perfectly into the flow of the game. The animation is smooth, fast and expertly programmed. The only complaint is that the sounds are overly sparse, with only the alien explosions to break the silence.

CROSSFIRE

Crossfire players should always try to position themselves in the far corners of the playfield where the number of possible directions from which you might be picked off are limited to two, then wait for enemies to move into the horizontal or vertical lanes placing them in your sights.

Overall, the Atari version is excellent, a virtual classic, while the Apple's is encumbered only by the clumsy mechanics of keyboard manipulation as opposed to joystick control. (Leigh Goldstein)

Hockey/Gamma Software/Atari 400 & 800/16K

Hockey is certainly the most neglected of the four major team sports in terms of computer simulations. Granted, there are few enough basketball programs but, incredibly, **Hockey,** by Gamma Software is the first attempt to reproduce the world's fastest team sport in a computer videogame.

That aforementioned speed, of course, is the main reason that no one has tried it. That, and the regional nature of the sport, which has never achieved acceptance in the southeastern US, while flourishing in the Northeast and Canada. So it stands to reason by some bizarre logic, that the first software company to attempt a simulation would be located in Los Angeles. Crazy, eh?

In any case, Gamma's version misses the level of realism attained in, Activision's programmable version for the VCS, by quite a bit. The players are drawn much too large for the cramped, on-screen rink. Due to the lack of space, the sport's primary characteristic, speed, is obliterated. Players spend half their time skating

into one another or passing into a gaggle of mixed skaters, hoping to get lucky.

The game is designed for two to four players—there is no solitaire version. When two human players share a team, player #1 controls the three skaters—actually, the flashing, designated puck carrier or defender closest to the rubber disk—while the other handles the goalie. When only one human coach is involved, he controls both the puck carrier and goalie simultaneously.

Again, however, the cramped quarters provide no room in which to recreate the subtleties of the game. No puck-handling, passing or fancy skating is possible in this undersized format. The overall effect is similar to a particularly uninspired clutch-and-grab contest between the Vancouver Canucks and the Bruins at Boston Garden without even the dubious enhancement of a punch-out.

The design is riddled with flaws. Players can only skate in one direction in terms of their on-screen position. As a result, players skating back toward their cage do so facing the opposing net, which hardly satisfies the gamer's desire for realism. The goal line is drawn straight across the rink. The puck can travel behind the lines, and, indeed, will rattle around behind the nets for much of the game. Unfortunately, the players are not free to skate behind either net, creating a situation in which 20% of the playing surface is open to the puck but not to the players!

But the severest criticism may seem a trivial matter to some—there is no audiovisual signal when a goal is scored, other than a weak computerized cheer. The puck doesn't hit the back of the net, or anything else, it just sort of drifts over the goal line and. . . stops. Whoopie. Former Boston Bruin/N.Y. Ranger Phil Esposito always claimed that the thing he loved the most about hockey was the sound, the "swish" the puck makes when it hits the back of the netting. Players of video sports simulations crave a similar cue when they dent the netting. It wouldn't have been necessary for Gamma to have provided the skyrocket display that follows each goal in Atari's programmable **Pele's Soccer,** but a little "swish" sure would've been nice.

Gamma's **Hockey** fans deserve more. (Bill Kunkel)

Sammy the Sea-Serpent

PDI/Atari
400 & 800/16K cassette

Computer videogames for children are still quite scarce. For every game produced with the very young gamer in mind, a thousand are turned out for his or her older siblings and parents. Still, one game like **Sammy the Sea Serpent** from the educationally oriented software producers at PDI, Inc., almost makes up for the paucity elsewhere.

Players use joysticks in this cassette-loaded program that uses a tape recorded voice-over to tell the child the story of how Sammy gets lost at sea and winds up traveling over strange lands, into cities—and through sewer systems!—all in his strange odyssey back to his mother's side. You'll be relieved to know he makes it. Periodically, Sammy's adventures take the form of basic videogames so simple that even the littlest arcaders will be able to help guide good ol' Sammy home.

The graphics are not sophisticated, but they are quite serviceable and even lend the whimsical storyline added charm at odd moments. The voice-over is of that standard "this is good for you" timbre that has haunted anything overtly "educational" since recorded sound was first used to instruct. Nonetheless, the reading is

SAMMY THE SEA-SERPENT

straightforward and does not distract from the overall program.

A computer-video simulation of a children's book, *Sammy the Sea Serpent* is a very good bet to amuse the old and delight the young.
(Bill Kunkel)

David's Midnight Magic/
Broderbund/Apple II/48K disk

Pinball, pinball, pinball!! Everybody and his brother is releasing pinball simulation games for the Apple computer. Bill Budge was first with his excellent **Raster Blaster,** and now we have **David's Midnight Magic** from Broderbund software. (Sub Logic will soon be releasing its own version of pinball as well.)

Midnight Magic is a beautiful simulation. The graphics are colorful and finely detailed, and the ball movement is smooth and realistic. Up to four people can play, and the high score is saved to disk.

Video pinball is a genre unto itself and must be evaluated not according to whether the program is a unique concept, but rather how much it resembles its counterparts in the game rooms. Either the table is good or it's boring. The good news here is that *Midnight Magic* is an excellent pinball game. While there is a small amount of dead space in the table, it generally plays fast and is challenging enough to keep the arcader going.

There are flippers at the top and bottom of the machine, and it is advantageous to keep the ball up top for as long as possible. The player can press the space bar to add english, but like other simulations of this kind, this tends to have an unrealistic quality to it. All other features are excellent. The little Apple-shaped bumper at the top and the ball catcher make for some great fun. Up to three balls can be flying on the table at the same time. The player can also turn on a magnet to prevent balls from falling through the sides.

David Snider is a programmer to watch in the future. His graphics techniques certainly rival the quality of any of the famous Apple programmers like Budge or Tony Suzuki **(Alien Rain).** The opening graphic sequence is a beauty to behold, and the demo alone is almost worth the price of the program. The flickering electricity of the machine and the beautiful colors are just spectacular. For $29.95 this program is tough to beat.
(Leigh Goldstein)

Ceiling Zero/Turnkey Software/
Apple II/48K disk

Ceiling Zero is an excellent new arcade game that is original in concept and extremely fun to play. Paddles are recommended.

The game begins with the player at the bottom of the screen and an energized ceiling at the top. Above the ceiling line is the mother ship casually dropping aliens towards the arcader's position. The first enemy wave consists of blue oval-like beings that move very slowly down the screen. When they reach bottom or touch the sides of the playfield they bounce in another direction. The aliens also bounce off the bottom of the ceiling.

The first level of play is ceiling 15. Once the player clears the screen, the energized ceiling lowers slightly and the mother ship releases faster moving aliens. The player must move from side to side blasting the aliens and avoiding any contact with them. If there is a collision, the player dies, and by pressing the paddle button, another one appears on the left side of the screen. As the ceiling gets lower and lower, a small ship is released from the mother ship. This ship flies a zigzag pattern across the screen. If the player does not destroy the ship before it touches the ground, the player loses a life. The first three ceilings of play have different colored aliens that move at faster and faster speeds, as the ceiling lowers. After ceiling #13, the player has to battle all three types. The game is very tricky when seven or eight aliens are bouncing all over the screen, traveling at various speeds.

Ceiling Zero makes for some superb gaming action. The concept is simple, but as play progresses the action gets very fast and challenging.

Turnkey Software has released a real winner its first time around. I would highly recommend *Ceiling Zero* to any Apple owner who enjoys a good arcade game. If only all the games were this well-programmed.
(Leigh Goldstein)

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STAND ALONE SCENE

By Joyce Worley

Reflex/Parker Brothers/$29

Reflex is a game of quick reactions for one or two players, a true test of coordination and timing. Flashing lights streak around the unit, and only the nimble-fingered will keep up.

Reflex looks like a flying saucer Twelve action buttons encircle a track of a dozen flashing lights. The buttons control the speed and direction of the lights traveling around the track.

Six red and six orange buttons divide the playing field in half. Each is identified by a number used for scoring and game selection.

The first game is **Juggler,** played solitaire. A ball of light flies around the track. The object is to juggle it as long as possible, sending it back and forth from the red side to the orange side without dropping it. It's like a circular pong game. The player taps a button the instant the ball reaches one side, to send it speeding toward the other side. The longer the gamer can bounce the ball from side to side, the faster it moves until he finally drops it. Four dropped balls ends the game.

The game scores by flashing a light beside three numbers, one at a time, to a maximum of 999. For a beginner, anything over 300 is very good, but with practice, the player's reflexes and coordination are bound to improve.

The second game, **Windup,** is for two players. A ball of light moves around the track. Press any button the instant the ball reaches it. If the light is moving in your direction, it speeds up and continues going the same way. If the ball is moving in your opponent's direction when you hit the button, it reverses its path.

Players continue trying to hit the ball each time it reaches their side, battling for control of the ball. Successfully keeping it moving in your direction builds up the speed, making it more difficult for the opposing player to change directions. The winner is the first player who makes the ball travel 10 times around the track in his direction.

Accelerator is a one-player game requiring the participant to boost the speed of the ball as high as possible, and then launch it into a crazy spin. Press button "A" the instant the light reaches it, and the speed of the ball accelerates. When you finally miss one, the unit emits a low sound, and the ball "free floats" around the circle. Press button "B" the instant it reaches that key to launch the ball. The light circles madly, then gives the score. The final tally depends on how fast the ball was moving when launched, and how close to button "B" it was (without) passing it) when the launch began.

The last two games are **Pounce,** for one or two players. Participants must stop seven sets of moving balls as quickly as possible. Two balls travel around the track at the same speed, but in opposite directions. Watch where the balls meet as they move around the track, then stop them simultaneously. If the balls meet at one button, press that button down. They will stop as soon as they reach that spot. If they meet at two buttons, keep those buttons pressed down to stop the balls. The longer the balls are in play, the slower they move, but of course the score drops the longer it takes to stop them. As soon as one set of balls is halted, the next pair appear until all seven sets are completed.

Reflex is a pretty game that will let you find out just how quick you really re!

Quiz Wiz Challenger/Coleco/ under $40

Quiz Wiz Challenger is a question-and-answer contest for one to four players. The game is especially suitable for family fun because of its educational nature—you'll

almost certainly be smarter after you play it than you were before!

The attractive unit has four playing stations, each with a quartet of buttons labeled A through D and colored red, yellow, green and blue respectively. Hoods at each station shield the buttons from the view of the opposing players. The control panel allows selection of two game play modes.

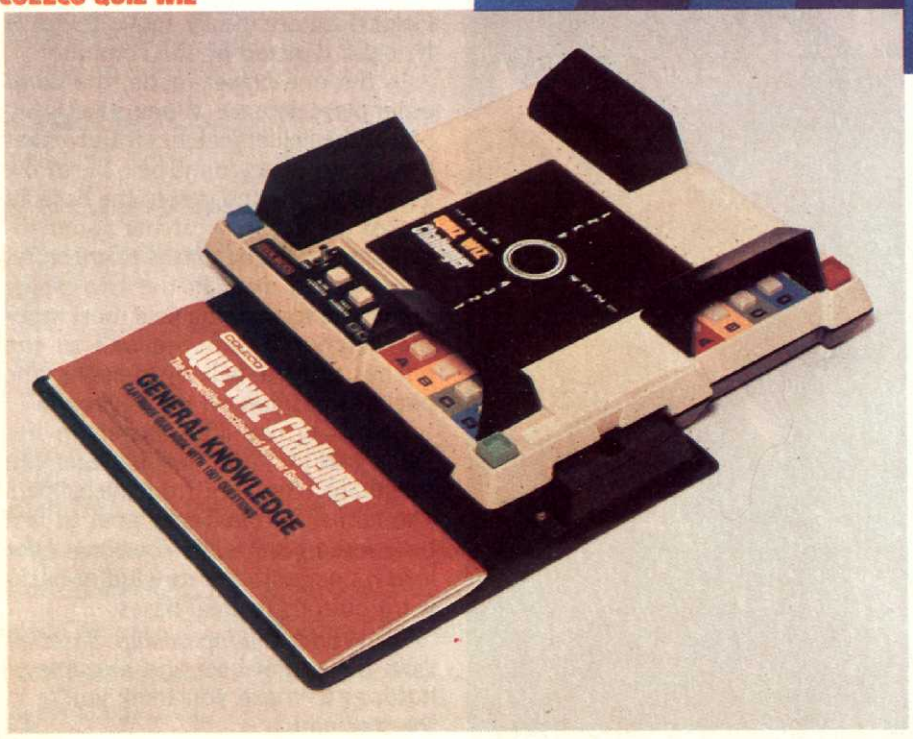
Quiz Wiz game cartridges are housed in attractive vinyl binders that also contain the *Quiz Wiz* question books. The cartridge slides into a slot under the device, allowing the book of questions to extend from under the console into the reader's play station.

Participants choose an identifying color and place the appropriate marker in the holder at their stations. They check in by pressing the colored button that corresponds to their marker. One player takes the station of the reader, and operates the game controls.

The reader presses "Go", and a question number appears in the display area. The designated multiple-choice question is read aloud from the *Quiz Wiz* book. The reader then presses "Go" again. An electronic tune plays and lights flash on the console. Each player presses the button at his station to choose an answer.

Lights flash up and down in front of the players giving the correct reply, then stop next to number one, indicating one point scored. An incorrect answer produces a low two-note failure signal.

COLECO QUIZ WIZ



The next question number then appears in the display area, once more to be read aloud from the question book by the reader.

The round ends when one player scores five points, or when a total of 10 questions have been answered. Electronic notes and lights indicate the winner of the round. Each player then checks in again, and round two begins. The game continues for a number of rounds equal to the number of players. When the last round is completed, a victory tune plays and the lights flash at the winner's station. A score recap indicates how many rounds each player won.

Game #2 is a race against time. Only the first player with the correct answer scores in this mode.

Quiz Wiz Challenger is sold with the **General Knowledge** cartridge

QUIZ WIZ/Continued

question book. There are 1,001 multiple-choice questions in 19 separate fields of knowledge, ranging from philosophy, religion and geography, to art, history, sports and literature. The questions vary in difficulty, but the introduction advises that the average adult should be able to solve three out of every four correctly. There's even a chart showing how various age groups score in each category, broken down by sex, so the contestants can measure themselves against the averages.

There are 26 cartridge/quiz books available for the *Challenger*. The variety of subjects is so great that anyone should be able to find something to their special interest. Titles include **Movies, Sports, Sherlock Holmes, Rock 'n Roll, The Bible,** and **Super Heroes.** The cartridges retail for $7.95 each.

This handsome, well-built unit has a storage compartment underneath the console to hold the player's markers. At its relatively modest price, the quiz game fan can hardly afford to be without one!

World Championship Baseball/Mattel/about $65

Mattel's **World Championship Baseball** is a fast-paced game that requires coaches to devise strategies making the most of their team's strengths and weaknesses.

The game, playable by one or two participants, allows each coach to choose a batting order from a 15-man roster. Individual players have strong points and weaknesses that must be considered when putting together the line-up. Statistics are provided on each player, giving RBI's, average, stolen bases, arm strength, and whether he bats and throws left- or right-handed. The gamer also selects the skill level from four possible speeds.

The diamond is viewed from the first base side on a three-color vacuum fluorescent display. The ball is yellow, and the path of a pitched ball from the pitcher to the batter is indicated by a line of dots, making it easy to follow. The team at bat are in blue, and fielders are shown in red. The animation matrixes realistic-looking little men in every position.

Each keypad has a door shielding the player's strategy from the opponent. The visitor's keypad is on the left. When playing against the computer, use the visitor's keypad to direct the offense, and the home team keypad to select the lineup you want to play against. If the manager doesn't want to select the lineups, the computer will do it. If the gamer wishes, he can then substitute players in the lineup. As in real baseball, any player removed from the lineup can't be used again until the next game.

The fielder catching the ball blinks. Catching the ball in the air lights the "out" sign. On ground balls, fielders must throw to the base to retire the hitter. Just press the position on the keypad where you want the ball to go. Fielders automatically move to cover fly balls, directed by the computer.

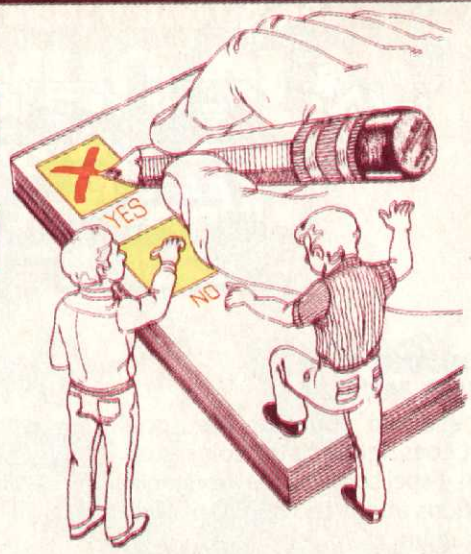
In the one-player mode, the computer plays defense. When a ball is hit, one of the fielders catches it and makes the throw. On a ground ball, the throw goes to the mound, not to the base, to record the out. The catcher automatically returns the ball to the pitcher after a swing and miss. In the two-player mode, the team in the field must make the catcher return the ball to the pitcher after a ball by pressing the pitcher's position on the keyboard.

Just as in real life, pitchers in this game can tire, and the manager can substitute a fresh one from the ballpen. The runner automatically goes to first base when a ball is hit. You control the lead runner with the forward or backward buttons to steal bases.

All *World Championship Baseball* lacks is a can of beer and a couple of hotdogs to make you think you're in the stadium!

MATTEL

READER POLL



Interaction between the readers and editors of **Electronic Games** helps make this a better magazine. The more we here at **EG** know about who you are and what you want to read, the better we can satisfy your needs and desires. That's why we run a Reader Poll in every single issue of this magazine. Rest assured that, even though we protect the anonymity of every respondent to our survey, the editor personally reads each and every ballot received. And of course, this is also your ballot for casting your vote for the most popular videogames, computer game programs and coin-op arcade machines.

Please return this poll sheet—or a photocopy if you prefer to keep your **Electronic Games** in perfect condition—to: Electronic Games, 235 Park Avenue South, New York, N.Y. 10003.

Sex: Male____ Female____

Age: Under 14____ 15-17____ 18-19____ 20-21____
25-29____ 30-34____ 35-44____ 45+____

Household Income:

Under $5000_____

$5000-9999_____

$10,000-14,999_____

$15,000-19,999_____

$20,000-24,999_____

$25,000+ ____

Marital Status: Single____ Married____

Number of Children in Household:

Ages:
Under 2____

6-11____

12-17____

Please rate the following features from 1 (awful) to 10 (great):
Switch On!____Q&A____Test Lab____E.G. Hotline____

Computer Playland____Programmable Parade____

Insert Coin Here____Strategy Session____

Arcade America____Passport to Adventure____

Inside Gaming____Stand-Alone Scene____

Players Guide____

How many hours per week do you spend playing various types of electronic games:

Less than 2 hours____ 2-5 hours____ 6-10 hours____

More than 10 hours____

How much do you spend per week on electronic games:

Under $2____ $2-5____ $6-10____ Over $10____

Please rate the following subjects from 1 (not very interesting to me) to 10 (of great interest to me):

Fantasy & Science Fiction____ Sports____ Wargames____

Coin-op games____ Videogames____

Computer games____

My favorite videogame cartridges are:

1. _____
2. _____
3. _____

My favorite microcomputer game programs:

1. _____
2. _____
3. _____

My favorite coin-op games are:

1. _____
2. _____
3. _____

COMING NEXT IN electronic GAMES

EXPLODING THE ARCADE MYTHS

An experienced educator and social scientist goes right into the coin-op arcades to dispel some of the worst misconceptions about the hobby of electronic gaming.

THE PLAYERS GUIDE TO THE NEW COIN-OPS

Which games will be getting your quarters during the next year? **EG**'s editors provide a helpful survey of all the latest videogame machines.

GAMES ON DISK

Sales of videodisc players have not yet come up to expectation, so the manufacturers are looking for extra ways to increase their appeal to the public. One possible answer: Designing games that can be played using the special features possessed by disc players.

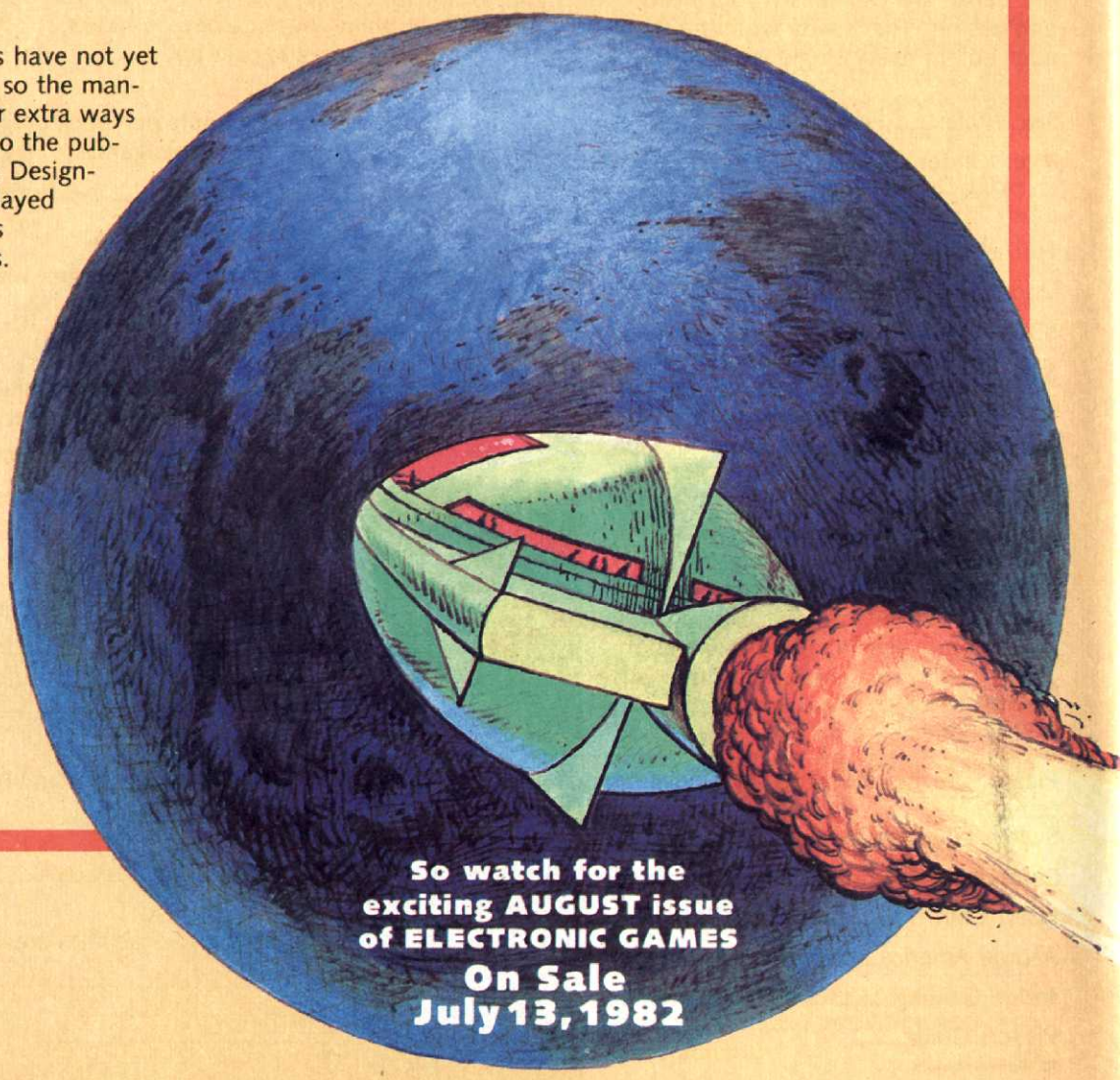
VIDEO PINBALL

Flipper Games in the Electronic Age

Pinball has resisted efforts to translate its dynamic action into videogame terms—until now. A new generation of game creators is bridging the game with a host of super tables!

There'll be plenty of other exciting articles and features of interest to arcade addicts, plus these regular columns:

- ★ **Switch On!**
- ★ **Q&A**
- ★ **Inside Gaming**
- ★ **Arcade America**
- ★ **Computer Playland**
- ★ **Programmable Parade**
- ★ **Stand-Alone Scene**
- ★ **Mini-Arcade Gallery**
- ★ **Strategy Session**
- ★ **Insert Coin Here**
- ★ **Passport to Adventure**
- ★ **New Products**
- ★ **Test Lab**
- ★ **Editors' Choice**
- ★ **Readers Replay**
- ★ **EG Hotline**



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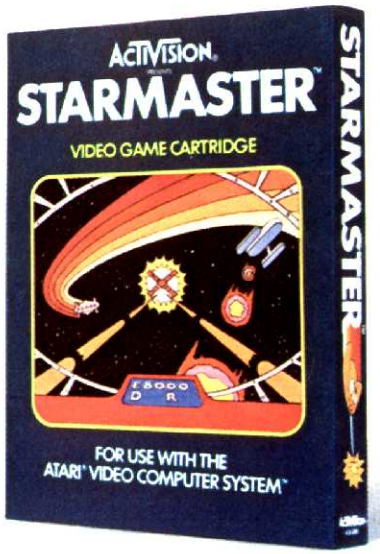

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